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## WORKS OF THE JEFFREY MFG. CO. AT COLUMBUS, OHIO.

One of the most widely known of the many manufacturing concerns of the prosperous and beautiful city of Columbus, Ohio, is THE JEFFREY MANUFACTURING COMPANY, bearing the name of the president and general manager, Mr. J. A. Jeffrey, who has managed its affairs from the date of its organization.

They began with the manufacture of coal mining machines, and in fact were the first company to introduce this class of machinery in America. Through their untiring energy and skill they have perfected their coal mining machines from time to time, so that it is now one of the greatest labor saving machines of the age. It is not only labor saving, but it is at the same time a blessing to the toilers in the coal mines, in that it does the hardest and roughest work.

This company, however, has not confined itself to mining machines alone, but has obtained control of valuable patents for chain belting, which is now in general use throughout the country, being used for elevators, conveyors and driving belts for handling grain, coal, ores, boxes, in fact most all kinds of machinery and material. In addition to the above, they also control the manufacture of the Slater Bolting Reel, the Gregory Grain Dryer, and the Wilson Spring Whiffletree. To take care of these specialties and to keep up with their constantly increasing trade, they purchased a large tract of land, upon which they have erected new works and offices, which they have reason to feel proud of. Their plant, as will be seen from the accompanying cut, embraces five departments: The foundry, the machine shop, chain shop, blacksmith shop and wood-working shop. The cutter works are equipped throughout with the most improved machinery, especially adapted for this work. It is superfluous to say anything in regard to the advantages of Columbus as a manufacturing city, located as it is on the border of the extensive coal and iron fields, and being the railroad center of the state.

Said an option broker of this city recently: "I don't ask people to speculate, but if they will speculate I desire to have their commissions. It is surprising, the mania there is for option trading. We have just remitted to a minister of the gospel, up in the state, \$500, which he has taken in very quietly as the result of a successful wager."

—Cincinnati Price Current.

## THE AMERICAN GRAIN TRADE AS SEEN BY A GERMAN.

In Germany and other European countries, says *Das Handels Museum*, in an article entitled "The Organization of the Grain Trade in the United States," the grain trade is carried on by a connected army of small middlemen. They travel through the rural districts, buy the crop from the farmer, and deliver to the larger dealers in the cities. The grain is shipped in sacks, and each sale is accompanied by delivery by hand. Only recently, at a few larger cities, Cologne and Mannheim, the American system is imitated. Also in Russia an elevator at Jelets, near Riga, is being supplemented with one at Odessa. This

all grain produced for market in North America is handled.

The high, narrow and unsightly elevators, a few of which a traveler sees when entering the port of New York, become very much higher and more numerous in the ports of the great lakes, and those of smaller size mark nearly all railroad stations in the grain-producing territory. They serve as a place of storage, and transfer the grain from the car or canalboat to the lake or ocean steamer. Where the railroads cross a river or bay the elevators are built so as to connect the two means of transportation.

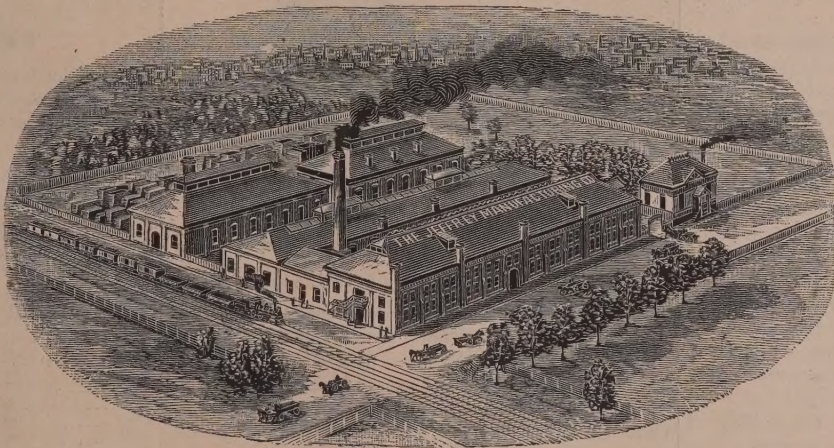
They are so constructed that the grain is lifted by steam or horse power, either on the inner or outer side of the elevator, through scoop "buckets," which are fastened to an endless belt to the top of the building. There the grain is cleaned by sieves and fans, weighed in a bin which has a movable bottom, whereupon it descends through wooden pipes to its proper place. This so called bin is a large case, measuring in the largest elevators 15 to 20 m. deep, ending at the bottom in a funnel. To unload the grain all that is necessary is to open a small slide, from which it then runs through movable pipes or shutles into the freight car or vessel.

At the trade centers of the interior the immense elevators, 40 m. (132½ feet) high, have room for from one to two million bushels. At seaports they are built upon piers which project far into the water so that canalboats and steamers can load or unload

on one side while the freight cars receive or discharge over the other. At the Erie Stores in New York 300 freight cars (150,000 bushels) can be unloaded and 200,000 bushels (100,000 at each side) loaded in the vessels daily. Dow's Elevator, constructed for marine traffic only, can even handle 60,000 bushels hourly.

From the time the grain leaves the farmer's wagon until it reaches the European port no manual labor is required further than to regulate the mechanism of the elevators or direct the trains or vessels. This saves time and money and sharpens competition.

An important economic and legal effect of transporting all grain in bulk is that the grain of different owners must be blended. They consequently classify or "inspect" and "grade" all grain in elevators, according to an agreed system, into a few definite kinds and qualities. Only those owners who have sufficient to fill a bin can demand that their grain be stored by itself. The trader or producer delivers his grain to the elevator and receives a warehouse receipt, which can be transferred by indorsement or "is



WORKS OF THE JEFFREY MFG. CO., COLUMBUS, OHIO.

system differs from that of Europe in its complete mechanical appliances and also in its effect to organize and unify the control of the grain supply, so as to rid the farmer of the middleman, and enable the whole farming class to deal as one man and at one price at any one time with the aggregate body of buyers who represent the consumers. The acknowledged thoroughness of the organization of the American grain trade and its growing imitation in Europe makes a closer inspection of it, as portrayed by one of the most competent observers of recent times, "Serings," of interest. Except on the Pacific coast, all grain is transported in bulk throughout North America, whether by rail, canal or ocean. This involves a greater use of mechanical aids in transferring, reloading, weighing and shipping. These were first made use of in the mills, then in the floating elevators, which take the grain from canal and river boats and shovel it into the vessels. Silo-elevators are erected at railroad stations and coast ports of the Atlantic export grain trade territory. In these stationary elevators, as distinct from the floating,



negotiable." It is an order on the warehouseman or elevator for a certain quality deliverable upon payment of customary charges. In America, therefore, grain has a representative judicial character, which it has more in theory than in practice in Europe. The elevator is like a bank of deposit for grain, and the warehouse receipts are transferable drafts for the grain. They have very properly been called "grain banks." The system naturally requires a strict and reliable classification. This is made in the small elevators through agents of the grain dealer, and the company who own and control the elevator. In the larger trade centers the classification is under supervision of the Board of Trade or Grain Exchanges. These corporations employ a special sworn inspector. In the state of Illinois this is done by the state government. The advantages outlined consist partially in the simplification of the inspection and sale of the goods. Rarely is the grain sold at the exchanges by sample. Nearly the entire trade is by means of warehouse receipts. The trade consequently has to figure with but a few principal classes of quality and name the prices. Speculation finds a firm basis in the fact that all warehouse receipts are recorded, to be of value, and from these the monthly statement of visible supply is computed. In the internal organization of the grain trade, the elevator system is important. It concentrates in comparatively a few large mercantile houses, who have leased, or who own, the elevators along entire railroads in the production centers. The farmer is freed of the small middlemen, who in Europe retain so much of the profit, and the whole country is one market. The elevator manager is always ready to buy grain according to telegraphic instructions which he receives daily, and pays for it in cash or by check. The prices offered at the elevator are compared by the farmer with quotations in the newspapers at the nearest best market, and if in his estimation the figures offered are too low, or the classification unfair, he still has the remedy at hand of freight his grain to the nearest larger trade center.

The crowding out of a large number of middlemen seems to make the danger of unfair competition between buyers disappear. Commission merchants are ready to effect sales. The millers and large grain firms who go to farmers direct enter as competitors. In consequence of the removal of the middlemen the farmer is in direct connection with the trade of the world. Since immigration follows the line of the railroads and no station remains without an elevator, they have come to be used very generally.

The small farmer, through the conveniences offered by elevators, need not build his own storehouse, but should he not be inclined to sell immediately after harvest he can, in consideration of a reasonable charge, place it in storage. He has the further advantage of borrowing money on his warehouse receipts, and is not compelled to sell his grain at a low price for lack of funds. The elevator system in North America has been principally due to the large railroads, whose interest it was to encourage the trade of farmer and dealer for production and export, and is but natural. In the far West, where emigration has not yet set in, elevators can be seen and not an acre in grain. At the larger interior centers and the Eastern export points the railroads endeavor to obtain as much as possible of the transportation, and are constantly adding improvements to facilitate the trade.

In New York they had to meet the competition of canalboats, which, besides transportation, gave the owner storage. The elevators are partly owned by railroads, as at Baltimore, or by individuals who have reserved the land to build on or for some other inducement.

### A GRAIN PROBLEM.

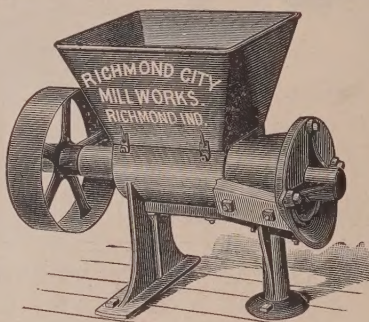
St. Paul grain men have been vexing their souls over a problem touching a grain bin and contents. It is this: Given a bin, dump into it separately five distinct qualities of wheat; open the spout at the bottom, and the query is, Which layer of wheat comes out first? The uninitiated say at once, with a few exceptions, "The first layer at the bottom, of course." W. A. Van Styke was determined to get at the facts, and watched the bin with his eagle eye very closely the other day after having caused a layer of barley to be placed on top of several layers of different kinds of wheat. The spout was opened, and the barley came rushing out first.—*St. Paul Pioneer-Press.*

The Winnipeg *Commercial* of recent date, estimates the increase of wheat acreage in Manitoba this year at 20 to 33 per cent.

### THE RICHMOND COB CRUSHER AND THE "PLANTERS' PRIDE."

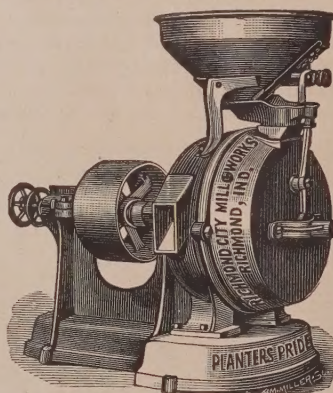
The experience of the best informed and most observant people proves that it pays to grind up cobs with corn as feed for stock. While there is but little nutrition in the cobs, nevertheless, when ground with the corn they serve to keep the meal open and spongy, so that the mass is more quickly and easily digested by stock. As stockmen and millers fully understand this subject, there is a growing demand for cob crushers, and it was to meet this demand that the Richmond Cob Crusher was designed; a machine that will rapidly and with but little power crush corn and cobs to such a degree of fineness that they may be fed into a burr stone mill, and be there reduced to any required degree of fineness.

Our illustration shows this machine. An inspection will show that it is a complete machine in itself, and when shipped is ready to bolt to the floor and have the belt thrown on. It occupies a floor space of 16 by 32 inches, and from floor to top of hopper is 26 inches high. Of



THE RICHMOND COB CRUSHER.

course, it may be set on supports at any desirable height from the floor. The pulley on the crusher is 14 inches in diameter, with 4½-inch face, and is intended for a 4-inch belt. The weight of the machine is 240 pounds, and the



THE PLANTER'S PRIDE.

usual speed is from 350 to 400 revolutions per minute. It requires from one to two-horse power, and being a horizontal machine, it may be driven by a straight belt from any ordinary portable or stationary steam engine, or from the tumbling rod of a horse power. All parts of the machine are interchangeable, and the capacity of the machine is from 20 to 25 bushels of ear corn per hour.

Of course, in connection with a Cob Crusher a grinding outfit is required, and the "Planter's Pride," an 18-inch French burr portable corn and feed mill, is designed as the complement of the Richmond Cob Crusher, though of course it may be used for grinding corn, etc., as well as the crushed corn and cobs. Like the Cob Crusher, it is sent from the shops ready to attach the belt. The mill (except the stones, which are of the best selected French burr stock) is built of iron and steel, and is very compact, weighing 700 pounds, and requiring a space on the floor only 28x40 inches. The burrs are eighteen inches in diameter, and are banded, faced, furrowed, and put in perfect balance. They are contained within an iron hoop, the back half of which is accurately fitted and bolted to the bed plate and front pedestal in such a manner as to bring the face of the bedstone exactly in tram with the spindle. The bed stone is cemented in the front half of the hoop or case, which is held in position by bolts passing through rubber springs, which yield when any hard substance, such as nails or pebbles, passes in with the grain, thus preventing breakage.

The bedplate has two pedestals, cast solid, on the tops

of which are the boxes or bearings for the spindle to run in. The spindle is made of the best quality of machinery steel, with extra long babbitt metal bearings, and large oil cup with hinged covers. The spindle is also provided with a relief coil spring, by which the runner stone is drawn back from contact with the bedstone when it is desired to stop the feed. The toe of the spindle is also provided with a patent oiler, by which all tendency to heating is obviated. The driving pulley is twelve inches in diameter, seven inches face, and the mill should be run at from 500 to 1,000 revolutions per minute, requiring from four to six-horse power. The capacity is from ten to twenty bushels of corn and fifteen to thirty bushels of feed per hour.

Both the above machines are manufactured by the RICHMOND CITY MILL WORKS of Richmond, Ind., who will give millers and all other interested parties full particulars on application.

### NEW ELEVATOR AT MACOMB, ILL.

An elevator of a peculiar construction is now approaching completion at Macomb, Ill. The fault generally found with country elevators is their comparatively great cost for a small capacity. This new elevator built for E. M. Duane & Co. of Macomb, by E. Lee Heidenreich & Co., grain elevator engineers and builders of Chicago, will have a capacity for more than 25,000 bushels, and the whole plant will cost less than \$3,500.

It will be equipped with a patent wagon dump, wagon scale, 60-bushel hopper scale, a heavy water-tight 9x12 feet steel tank, two sets elevators, dustless separator and fanning mill, and all modern contrivances for the proper weighing, receiving, cleaning and shipping of the grain.

The elevator rests on a solid limestone foundation laid in cement. The machinery is driven by a two horse power engine. The main building is 24x72 feet, has storage bins 20 feet high, and a regular cupola in the center. The engine room is 24x24 feet, and the office is 12x14 feet. Both adjoin the elevator. This venture in the construction of cheaper, and yet more efficient, elevators for country points will undoubtedly meet with great favor among that class of country grain dealers who have stuck to the shovel house and the flat warehouse because their business was not of sufficient magnitude to justify them in making the expenditure necessary heretofore for the construction of a first-class elevator.

### PRICE OF WHEAT.

The following table taken from the report of the Agricultural Department shows the average export price of wheat sent from this country for the last seventy years:

Year.	Price.	Year.	Price.	Year.	Price.
1818.....	\$2.00	1842.....	\$1.120	1865.....	\$1.942
1819.....	1.26	1843.....	.850	1866.....	1.406
1820.....	.75	1844.....	.900	1867.....	1.273
1821.....	.81	1845.....	.860	1868.....	1.899
1822.....	.70	1846.....	1.040	1869.....	1.409
1823.....	1.32	1847.....	1.370	1870.....	1.289
1824.....	1.02	1848.....	1.310	1871.....	1.316
1825.....	1.03	1849.....	1.440	1872.....	1.473
1826.....	.86	1850.....	1.060	1873.....	1.312
1827.....	.67	1851.....	1.000	1874.....	1.428
1828.....	.76	1852.....	.950	1875.....	1.124
1829.....	1.59	1853.....	1.120	1876.....	1.242
1830.....	1.02	1854.....	1.550	1877.....	1.169
1831.....	1.30	1855.....	1.660	1878.....	1.338
1832.....	1.06	1856.....	1.850	1879.....	1.068
1833.....	.92	1857.....	1.530	1880.....	1.243
1834.....	1.07	1858.....	1.020	1881.....	1.113
1835.....	1.08	1859.....	.950	1882.....	1.185
1836.....	1.00	1860.....	.981	1883.....	1.127
1837.....	1.57	1861.....	1.226	1884.....	1.066
1838.....	1.29	1862.....	1.144	1885.....	.862
1839.....	1.50	1863.....	1.293	1886.....	.870
1840.....	.95	1864.....	1.327	1887.....	.890
1841.....	.95				

A load of rye was recently received in New York City for shipment to Germany.

It is said that the day "Old Hutch" of Chicago, made \$1,000,000 on wheat he entered a Chicago barber shop and asked for a shave. This was a few hours before he made the \$1,000,000. Before the barber administered the lather, "Hutch" asked what the tax was to be. The barber replied that the price was 15 cents. "Hutch" said 15 cents was too much, but that he would give 10. The barber refused to be knocked down, so "Hutch" went across the street and got shaved for a dime. Thus encouraged, he went abroad in the market place and shaved wheat until he made \$1,000,000. He is the king of financial razors.



[Written expressly for the AMERICAN ELEVATOR AND GRAIN TRADE.]

## THE GRAIN SITUATION.

THE HARVEST OF WINTER WHEAT JUST COMMENCING.—THE GROWING SEASON CONTINUES BACKWARD AND WITH PLENTY OF MOISTURE IN NEARLY EVERY GRAIN GROWING STATE IN THE NORTHWEST.—SPRING WHEAT PROSPECTS FAIR.—OATS DOING WELL AND INDICATIONS NOW POINT TO A BIG CROP.—THE CORN FIELDS ARE CLEAN, AND WITH WARM WEATHER WOULD MAKE A GREAT SHOWING.—LOW PRICES OF GRAIN MAKING LIGHT RECEIPTS.

BY S. THORNTON K. PRIME.

### No. VI.

At this period of the growing season our winter-sown spring seeded and planted crops have made such growth and progress that we generally can form some idea as to their final outcome.

So far we have had a most peculiar season, opening as it did under most favorable circumstances for the early seeding and planting of our spring crops, and the country went literally wild over the prospects which seemed then to be for the most abundant crops the country had ever gathered. But as the season advanced and with an absence of moisture which was greatly needed, even more so than in an ordinary year, and also with a very low degree of temperature and in some areas resulting in frost, but which, strange to say, did not produce damage, we are brought now to one of the most important periods of the growing year. For the last three weeks we have been trying to overcome the deficiency of moisture which has existed now for nearly two years.

This has been very nearly successfully accomplished in every grain growing state north of the Ohio River with the exception of the states of Minnesota and Dakota, where the rainfall has not yet come up to an average.

Another peculiarity of the season has been the long continuance of cool weather. I thought that a year ago our season was very backward and also the growing season of 1887, but the present year makes a record of a lower temperature at this time of the year than in either of the two preceding years.

Yet while these general conditions for the time being are discouraging, at the same time our general crop prospects which have been so far defined, are all of an encouraging character.

One effect of the long-continued cool weather has been to make the date of harvest considerably later than was expected sixty days ago. In other words, at this writing the country expected to have seen the early winter wheat and the late also, nearly all cut and in shock. But so far there has been very little harvesting done, except in Texas, Tennessee and Kentucky.

Corn is very backward. For the last twenty days in all the great corn surplus states the crop has literally stood still. In Nebraska at this date the prospects of the crop are fairly good. The whole crop has all been cultivated once, and a great deal of it twice.

The indications now all point to a rapid growth on the advent of warm weather. No state in the corn belt probably ships more corn in the raw state than the state of Nebraska. During the winter the receipts from Nebraska at grain centers and at the seaboard were enormous. But the last sixty days, owing to the fact that the price of corn was so low in that state on account of their distance from market, these receipts have fallen off to almost nothing, and there is no prospect that they will pick up again at least until the present growing crop is assured. I think also that Nebraska has marketed the largest proportion of her surplus corn.

In Iowa while the conditions have not been as uniform so far as moisture is concerned, this state now has all the moisture it needs, and the crop averages all the way from eight to ten inches high, the fields generally clean, waiting for warm weather, which is now so anxiously looked for in every corn producing state in the Northwest.

The movement of old corn from Iowa, like Nebraska, is small, and it is thought that the shipments the next sixty days will be light.

Illinois for the last twenty days, and in fact ever since the present crop made its first appearance above ground, has been subjected to a very trying ordeal. In this state all our conditions for planting were very favorable, and we made a good stand of corn.

The crop has all been cultivated once and in many

portions of the state twice; but from the first of June down to the closing of the present week, the fields have been in no condition to work. The rains in Northern and Central Illinois, where the great bulk of the corn crop of this state is made, have been continuous and heavy, and the consequence has been that with the lack of sunshine and a very low degree of temperature the fields have not dried out and have not had that attention they require at this very important period in the early history of the corn crop.

The daily rains and cold rains and Northwest winds have certainly not pushed the corn crop in Indiana, and it has not made any perceptible change for the last fourteen days.

The corn crop of Kansas and Missouri has had to contend with during the whole growing season, all the rain of the corn belt, and while the other states have been longing for it, these two states have had more than they want. These conditions, as above stated, give a fair idea of the corn outlook up to the fifteenth of June, and while for the time being they are discouraging, yet on the other hand we have an excellent stand of corn. The fields fairly worked and unusually free of weeds. Most of all, every state at the present time has nearly enough moisture to carry the crop into tassel.

With these favorable conditions the next thirty days ought to show a very rapid growth and a regain of all that we have lost during the last thirty days with the cold backward weather. There is no crop grown which can recover itself so easily with good surroundings as the corn crop.

The oat crop is just beginning to head out. In many portions of the country it suffered considerably from drouth in the latter part of April and in the early portion of May, and the rains which we have referred to came too late to benefit it materially. Oats suffered badly from drouth in Southern Ohio, Indiana, Tennessee and Kentucky, but in the northern portion of the oat belt and where the largest proportion of the crop is made, there the deterioration was not as severe and trying.

There is a strong possibility and a probability also, that the oat crop will lodge much more so even than it did last season; those interested in oats will remember the great storm of the third of July, which swept over such a large portion of the states of Iowa and Illinois just at the time the oat crop was filling, and the damage which followed. But, notwithstanding this accident to the crop, we made an immense crop of oats.

Barring all accidents between now and harvest the country has every prospect again of making another big crop of oats. I think every year, particularly for the last five or six, the oat acreage has increased very largely, and probably never in the history of the country was the consumption of the oat crop as large as it is to-day. Why is it, with successive years of no failure in this crop, that we never see from one year's end to another a single day when it can be said that there is a glut of oats in the market or that prices are affected by large receipts.

It is to-day the most profitable crop that the farmer grows. There are considerable old oats yet in the country, very largely, however, in farmers' hands.

The season for the seeding of the spring wheat crop was propitious, with the exception of the fact that there was a very great lack of moisture, and after the crop was put into the ground violent windstorms disturbed the seed in some of the most important grain growing areas of Dakota and Minnesota.

The soil has been so dry and loose all the time that the good effects of the rains which have fallen are very soon dissipated, and while the rainfall has been below the average the weather has been so cool and cloudy that the wheat has not suffered as yet materially, but at no time since the crop was seeded has Dakota, particularly the northern portion of it, needed rain as much as at the present time.

In Southern Minnesota the outlook is much more favorable than in any other portion of the great spring wheat areas, and the general prospects to-day are good for this crop.

At the present time, as we are on the very eve of harvest, there is a very great desire and expectancy with regard to general conditions and final results of the winter wheat crop. In the first place the outlook seems to point to a crop very little different, if any, from the winter wheat crop which was gathered in 1888. The general conditions are by no means as favorable as they were at the date of our report thirty days ago. Winter wheat ought to have had good copious rains early in the season, when the crop

was stooling out. But then the drouth was very severe; this caused the wheat to run up spindling and head out in many places short. What the winter wheat belt needs at the present time and for the next three weeks, is dry weather. There ought not a drop of rain, strictly speaking, to fall during that whole time.

The California harvest of wheat has just commenced, and while in quantity and quality it is generally conceded to be a good one, yet not as enormous a crop as has been looked for.

## INFLUENCE OF SILVER UPON THE PRICE OF GRAIN EXPORTED.

A recent number of *Bradstreet's* contains an article on "India Wheat and the Price of Silver," in which the writer claims that American silver helps India to sell her products in the international markets, and thereby decreases the price of American goods that have to compete with those of India. He says: "The earlier export of wheat from British India to England was in the shape of ballast for a few ships, the commanders of which thought they could increase the earnings—or rather decrease expenditure—by taking in wheat for ballast instead of stone. In this manner the attention of the London merchants was drawn to the possibility of importing British Indian wheat in opposition to American wheat, but it was found that at ordinary freights no profit would ensue, as the cost of transport was so favorable to America that no margin would be left for importers, and so the matter was dropped for a time, and American wheat was exported to London at remunerative prices.

"The London merchants waited and watched, and their reward came in the shape of lessened price of silver bullion, owing to increased issues of British India council drafts, which, as it depreciated in value, enabled them to send it to India at the price of gold and purchase wheat to be imported into London in increasing quantities until they have reduced the price so low that it hardly pays to export American wheat.

"Silver has not been demonetized in British India. A rupee in India carries the same purchasing power now as it did twenty years ago. It is only depreciated for international exchange purchases. The rupee was fixed when silver bullion was at 60½d. an ounce, and it is received in payment of revenue at that rate, and is paid out in official salaries at the same price, hence the rupee keeps up its price.

"Exchange between America and England is almost at par, whereas between British India and England the latter country is favored to the extent of 43 per cent at the current depreciated price of silver bullion. This more than counterbalances the increased charge for transport, and enables Indian wheat to compete so successfully with American wheat.

"Appreciate the price of silver to 60½d. an ounce and exports of wheat, cotton and other staples from British India would decrease to a very considerable extent, while American exports would increase to a corresponding extent at largely enhanced prices.

"A large silver syndicate to prevent silver bullion going to London and being used there in competition with British India council drafts is the only method to prevent the existing competition with American exports. American silver damages American exports."

## BOARDS OF TRADE.

The first British Board of Trade was created by Charles I, in 1636, at which time the regulation of commercial affairs was made a royal prerogative in the exercise of which Parliament could not interfere. During the reigns of Elizabeth, James I, and Charles I, commerce had been restricted by giving favored parties a monopoly in the manufacture and sale of any article they might desire. Commerce, instead of being stimulated by the Board of Trade, suffered from its injurious regulations. Cromwell reorganized the Board, placing his son Richard at the head. He associated with him twenty merchants from different parts of the kingdom, together with certain members of the council. After the restoration of the Stuarts, there was a second reconstruction and a division of duties by which the care of the British colonies was committed to one division of the Board and the superintendent of commerce to the other. This Board might have been successful had it not been for the political commotion of the times, but it became an object of contempt and ceased to exist. In 1695, when English commerce was distressed beyond all precedent by the cruisers of



France, an attempt was made by Parliament to form a Board with most of the powers of admiralty and treasury united for the protection of trade. This measure was defeated, and the year following a standing commission, known as the Lords Commissioners for Trade and Plantations, was formed. With this Board the governors of the colonies were required to keep up a constant correspondence relating to the trade in America. There is hardly a wrong in the long and stirring array of grievances in the Declaration of Independence for which this Board was not responsible. The Board was made up of such men as Gibbon, Evelyn and Locke, men of letters rather than trade.

The British Board of the present is as follows: The president is a minister of the crown. No person concerned in commerce can become a member of the Board. The duties are: Care of mercantile marine, to advise colonial secretary in matters pertaining to colonial commerce; confer with the lords of the treasury upon matters relating to customs and excise; to communicate with foreign secretaries upon formation of commercial treaties; report upon dock and railway bills; exercise partial control in the various branches of industry; prepare monthly statements of exports, shipping and the like. The annual statistical reports of this Board are the most valuable that are published.

The New York Chamber of Commerce is by far the oldest in the United States. It was organized in 1768 for "promoting and encouraging commerce, supporting industry, adjusting disputes relative to trade and navigation and procuring such laws as may be found necessary for the trade in general." Two years later the Board obtained a royal charter. In 1874 the Chamber was continued a corporation by legislative act. For nearly eighty years the Chamber was homeless. It first met in a tavern, then (as required by charter) in the "great room of the Exchange." To-day it is esteemed a great honor to be a member of the New York Chamber of Commerce.

### A LIVERPOOL GRAIN WAREHOUSE.

The method of handling grain at the Alexandra Grain Warehouse of the Liverpool Grain Storage and Transit Co., Limited, will undoubtedly be of interest to all of our readers, and especially to our American readers. This immense granary covers an area of about 62,100 square feet, and has a frontage on four streets. It is situated near the Alexandra Dock, Liverpool.

The warehouse contains a passenger elevator which runs to the top floor. The grain bins, which have brick walls, are hexagonal in shape, and measure 12 feet in diameter and 80 feet deep. Each bin has a capacity of about 6,700 bushels. There are 250 bins of this capacity and several others of smaller capacities, so that the warehouse has a capacity for about 1,850,000 bushels.

On the top floor are three large India-rubber belts running upon stages, which convey the grain from the three receiving elevators. Below these large belts are five smaller India-rubber belts, running in a transverse direction to the large belts. These receive the grain from the large belts and deliver it into iron spouts, which communicate with the different bins, so that grain is easily transferred from one part of the house to any other part. On this floor there is also an Eureka Dustless Receiving Separator, with scalper and double separation, which has a capacity for cleaning about 3,300 bushels of wheat per hour.

In the basement of the building there are five subways running the entire length of the building. The grain runs into these subways from the bins through outlets, which are provided with an iron valve fixed flush with the passage walls. As the grain runs into these subways it is received by one of the belts therein and carried to the elevators, by which it is raised to the delivery floor and discharged thence, after being weighed into cars or carts.

Grain shipped to the warehouse by water is discharged from the vessels by elevators on the dock quay, and conveyed by means of belts traveling through a subway to the receiving hoppers in the basement of the elevator. These belts, which are 28 inches wide, travel about 10 feet per second, and will convey to the house about 5,000 bushels per hour when fairly loaded. As the grain is discharged by these belts into the receiving hoppers it is taken by the receiving elevators and raised to the top floor, where one of the three large belts receives it and conveys it on its way to the bins.

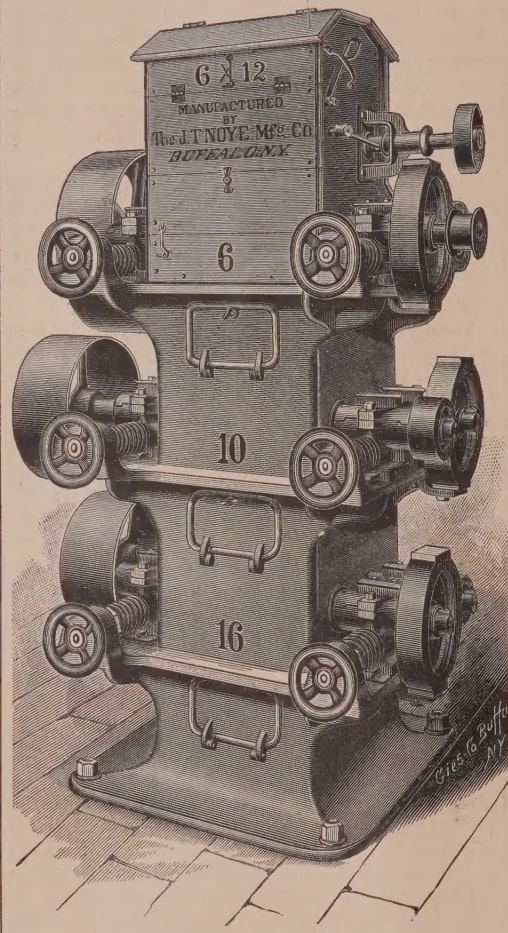
The machinery used for delivering the grain is pro-

pelled by hydraulic power, but the power for propelling the rest of the machinery is supplied by a double cylinder Corliss Engine of 350-horse power. The fly-wheel, which is placed between the two engines, weighs 22 tons, is 22 feet 6 inches in diameter, makes 60 revolutions a minute, and has 15 grooves for transmitting power by ropes.

There are double tracks on three sides of the building, each side being assigned to a different railroad, so that the shipping facilities are first-class.

### THE NOYE SIX-ROLL CORN AND FEED MILL.

The handsome full length portrait presented herewith is that of a remarkably successful rival to the millstone as a grinder of corn and feed. Though not long in the field, the Noye Six-Roll Mill has drawn the notice of millers everywhere by the sustained excellence of its operation.



THE NOYE SIX-ROLL CORN AND FEED MILL.

It has greater capacity, granulates more evenly, and takes less power than the millstone. It grinds with equal facility corn, oats, rye, barley, buckwheat, malt—in short, all substances that once were ground on stones, and is warranted to run cool. It is substantial yet graceful in construction, singularly easy of operation and adjustment, and always in perfect readiness for work.

It is no wonder that with such points of superiority the Noye Six-Roll Mill has rapidly come into favor with corn and feed millers. First introduced as a nine-inch mill, its quick popularity led the Noye Company to bring it out with six-inch rolls also, and it is now made in both sizes. If the manufacturers believe that this mill is in every way superior to all others of its class, they are not alone in that belief, but are continuously receiving voluntary testimonials confirming it. One firm, Messrs. Snell & Makepeace, of Theresa, N. Y., writes under date of Feb. 22: "In regard to your roller feed mills, would say they are a great success. We have run it for nearly four months on all kinds of grain, and find it works perfect in every respect. It will double the amount of grinding that we could do on stone, and does better work. Three mills have been ordered of you after inspecting ours. Don't be afraid to guarantee these mills."

A feed mill catalogue has been prepared and will be sent, with full particulars, to any address on receipt of request by The JOHN T. NOYE MANUFACTURING COMPANY, Buffalo, N. Y.

If there is one thing more than another that goes against the grain it is a reaper.

### A NEW FOOD PLANT.

Recently there has been an addition made to the food plants produced in this country, which in time may prove a strong rival of our Indian corn. The new plant is called sweet cassava. The *Garden and Forest* says, it seems to have been proved beyond question that on the southern border of the United States there are considerable areas admirably adapted to growing this remarkable plant as a staple article of home consumption, while in Florida, at least, its manufacture into starch, tapioca, and glucose ought to become a leading industry.

The cassava plant is closely related to the ricinus or castor bean, which it resembles in general appearance. It is a handsomer plant, not having the coarse, rank aspect of ricinus. It does not bear much seed, and it is not propagated from seed, but from cuttings of the larger stems.

As to the quantity of cassava root that may be obtained from an acre of ground, no satisfactory estimates have as yet been made. It must vary greatly under various conditions. A single plant produced fifty pounds of roots, the top measuring 8 feet in height and 10 feet in breadth. It had been highly manured. A person who has given special attention to the cassava thinks that from ten to fifty tons of roots of one year's growth ought to be obtained from an acre of land, according to its quality. This is little better than conjecture, but certainly the plant yields enormously under certain conditions.

The uses to which cassava may be put are almost too numerous to mention. By manufacture it may be converted, with scarcely any waste, into starch, tapioca, and glucose. In the tropics cassava flour is used exclusively for making a large wafer or cracker, which is quite palatable and keeps without injury for months. Florida housewives have used it for making bread, puddings, custards, fritters, jellies, etc.; also, as a vegetable it is used in all ways in which Irish potatoes are used.

It is as food for stock, however, that cassava has excited most interest. It is greatly relished by cattle, horses, hogs and poultry, and seems to be a very wholesome article of food. The great tubers, sometimes three or four feet in length, may be taken from the ground at any time of the year and used as food for man or beast.

### CANADIAN BARLEY IN ENGLAND.

The *Canadian Gazette*, London, Eng., says: "Canadians are beginning to arouse themselves to secure a British market for their barley. Last year (1887-'88) only 1,687 bushels, out of a total export of 9,370,158 bushels, came to the United Kingdom, while 9,360,521 bushels, or nearly the whole export went to the United States. But the United States import seems to be falling off, owing probably in a measure to the development of barley culture in California and other Western states, and Canadians are therefore looking round for other markets. Only the other day the Hon. Mr. Drury, Ontario Minister of Agriculture, from whose province nearly the whole of the export comes, dispatched to England several large parcels of two-rowed barley as samples, for the brewers to test its value. The belief is that a market may be found in England for this description of barley; and the hopes of Ontario growers are increased by the knowledge that last year California alone sent over a million bushels to the United Kingdom, or nearly five times as much as in the previous year. British Columbia should certainly share in this British trade, for her barley has all the good qualities of the grain in California and Oregon; and there are many in Ontario who think that the farmers of Eastern Canada may also find a much larger British market, if they will only adapt themselves to the growth of the class of grain most in request."

The *Farmers' Review* of recent date says: "The area sown to barley in the United States remains about the same from year to year. In Dakota quite an increased acreage was seeded in 1888, which was balanced by reductions in other sections; but this year reports of Dakota correspondents show a falling off in this respect. This may be due to the fact that chinch bugs damaged the crops to some extent last season. It is quite probable that the entire acreage of the present season will not much if any, exceed that of 1886, which was estimated by the department to be 2,652,957 acres. The reports show that only a very small acreage has been sown in Ohio, Michigan and Illinois, and practically none in Indiana, Kentucky and Kansas. Compared with last year, Dakota has 92 per cent., Minnesota 96, Wisconsin 95, Nebraska 97 and Iowa 94."



## THE "CHAMPION" OAT CLIPPER.

Last month we had a few words in reference to the Champion Oat Clipper. On this page we give an illustration of this machine. The utility of the oat clipper is not questioned by those who have had one in operation. One party using a clipper writes that his cleanage has averaged about 200 pounds per car over ordinary cleanage, while commission merchants praise clipped oats as bringing the highest prices and giving satisfaction to the trade.

It will be seen from the illustration that the machine is quite simple in construction. It occupies a floor space of 3x5 feet, and is 7 feet 6 inches high. The capacity of the machine is from 500 to 800 bushels per hour, and it does not require any attention except oiling and a regular feed of the oats. The machine can be adjusted to clip the oats more or less according to weight and quality, as may be required to bring them up to the standard sought. The "Champion" does not hull the oats, but polishes the kernel, takes off the dark points on the end, leaving a bright, plump, natural berry. It is claimed that by its use oats can be raised from 32 pounds up to 40 pounds, test weight, with from 600 to 800 pounds per car less cleanage than obtained by other similar machines. This machine does not grade the oats in several grades, but makes one grade, and it is claimed that it requires less power than any other machine of the same capacity. We are told that the difference in cleanage will pay for the "Champion" in a short time.

This machine is set up complete when leaving the shop, ready to put into place. It is manufactured by MESSRS. WELLER BROS., 94 Wendell street, Chicago, Ill., who ship it to responsible parties on trial. They will be pleased to give readers any information respecting the "Champion" that may be desired.

## GOVERNMENT CROP REPORT.

The Government crop report issued June 10 states that the June returns to the Department of Agriculture show slight increase in the winter wheat area seeded, but the breadth harvested may be possibly a million acres more than in the last crop, largely from Kansas and California. The condition of winter wheat still remains comparatively high, though it has fallen three points during the past month, and averages 93 for the country. The following statement of averages is given: New York 96; Virginia 97; Michigan 90; Illinois 92; Kansas 98; Pennsylvania 95; Ohio 88; Indiana 90; Missouri 98; California 98.

The area of spring wheat has apparently increased about 3 per cent. The preliminary estimates show a loss of 3 per cent. in Wisconsin and 1 per cent. in Minnesota, and a gain of 1 per cent. in Iowa, 3 per cent. in Nebraska, and 7 per cent. in Dakota. There is an increase in the mountain region. The condition of spring wheat is high except in parts of Dakota where it has suffered from drouth. The averages are as follows: Wisconsin 93; Minnesota 93; Dakota 88; Nebraska 98; Iowa 93. The condition is generally high in the mountain districts. The average is nearly ninety-five for the entire spring wheat breadth.

An increase of two to three per cent in the area of oats is reported, while the condition is several points below the normal standard of full corn.

The area of barley is about the same as last year and its average condition is 95.

Rye made no perceptible advance in area and its general average condition is 95.

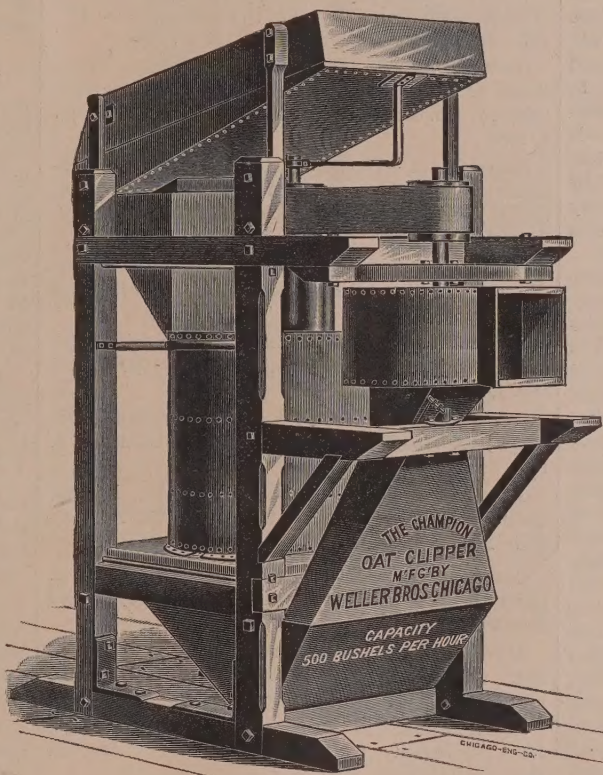
One day recently when wheat was selling at 76¼ cents, a sarcastic broker circulated the following bogus dispatch: "There is a growing conviction among operators that this crop of wheat is not yet cut, shocked, threshed, marketed, inspected, registered nor ground up into flour, and that this 6¼ is not 86¼ nor 96¼ nor even 106¼."

In his report of June 5 the secretary of the Missouri State Board of Agriculture reports that the condition of wheat declined six points during the month of May, being now 92 instead of 98 May 1. The decline in condition is due to dry weather and to the ravages of chinch bugs, excess of rain in Southwest Missouri, which is causing rust and the Hessian fly. Chinch bugs are very numerous throughout, a large portion of the state, but the late general rains are keeping them in check.

## POINTS ABOUT ELEVATORS.

BY R. JAMES ABERNATHEY.

Do any of our elevator men fully understand the importance of keeping water out of the basement and pits of their elevators? It would sometimes seem as though they did not. A day or two lost now and then, no matter how busy the season, in pumping and baling water and cleaning out filth seems to have its influence but for the time of trial. After the storm has passed and the accumulation of filth and water gotten rid of everything goes ahead again as though another rain was not likely to occur. I happen to know of one such case, an elevator and flour mill combined; I may know of several, but have not observed them so closely. Whenever a heavy rain comes that mill and elevator cease to operate for a brief spell, they get drowned out, but the owners are to blame for it, because they have never made sufficient, if any, provision for running the water away from the building. Maybe some people think it can't be done in all cases. It may be impossible where the ground is very



THE "CHAMPION" OAT CLIPPER.

low, and the water lies close to the surface at all times, to prevent water rising up in the basements and pits during heavy rains, but it certainly can be prevented running in off the surface of the ground in all cases. The earth immediately surrounding the wall of the building should be well raised and made to slope away from it in every direction. It should also be made very compact, so that the falling rain will not penetrate it. The roof should not be allowed to drain directly on the ground; if it does the raised earth will soon be worn away. Gutting of ample capacity for carrying off the water of the heaviest rain should be provided, and the water gathered to one or more points where it can be discharged far enough away from the building to prevent the wearing away of the raised portions of the earth. If the surrounding ground falls away in any given direction from the house the water should be conducted to the lowest point, thrown well out by projecting spouts and allowed to escape with the common flood, which should be assisted in keeping away from the building by ditching and draining to still lower points, if the lay of the land will admit of it. If such precautions are always taken to prevent water running into the basements of elevators and mill buildings there would certainly be no trouble from that cause. And frankly, will not the benefits be worth the trouble?

Let every man interested who has been troubled in that way ask if it would not be worth much more of an effort to get rid of the evils connected with flooded basements. Their mental answer will be yes, and at the moment of trouble they will solemnly vow to prepare for future similar emergencies at the first opportunity; but the

present is o'er, business is resumed, time presses, the incident is forgotten, and again a "sufficient unto the day is the evil thereof" sort of feeling creeps, unbidden, over them, and so like the roof or the Arkansan's house, the matter is postponed until another rainstorm comes, when it can't be done. Well, there is certainly no wisdom in such methods, besides being very poor business policy.

In localities where the water rises naturally to and lies near the surface I no longer believe it policy to run the basement below high, or average high, water line. Such difficulties are usually found in river bottoms, where the soil is sandy and of a loose character, in which the water rises and falls with the rise and fall of the river. It is possible to make a basement water-tight in such localities, but the expense of doing it is a bar, and unless parties are willing to do it right, regardless of time and expense, it should not be attempted. To do it right the floor of the basement should be heavily planked before any walls are laid, the planking reaching under all the walls all around the building. The planking should lie lengthways of the building, be jointed and fit close together, making the joints as nearly water-tight as possible. Heavy timbers should then be laid across the floor thus formed in such positions as to allow the main parts of the building to rest on them. However, before any flooring is laid rock piers should be sunk deep enough into the ground to insure against any yielding, immediately under that portion of the floor where the posts rest. That precaution is to keep the building from settling when loaded. The timbers referred to must also reach under the walls, and all butt joints in the planking must come under the timbers. If the timbers have to be spliced to make them long enough the splices must come under the posts.

When the flooring has been laid the building of the walls can proceed, using the best of cement for laying it, until it gets above the water line. The walls should be started in a heavy layer of cement put down on the planking to make sure that no water comes through between the planking and bottom of the wall. After the walls have been completed, or at any convenient time during the process of erection of the building, the bottom of the basement must be heavily and well concreted, which, as will be understood, must be laid on the planking. The best of cement should be used in the preparation of the concrete, and the whole body or layer made perfectly water-tight at every point in the floor. There should not be less than four inches of concrete, and it may be thicker, if desired. A plank floor can be laid above the concrete, if desired. The necessity for laying a heavy plank floor beneath the concrete will, I think, be readily understood, because it is well known that if the bottom of an ordinary concreted basement lies a few feet below the water line the water beneath it will press so hard against it in an effort to seek a common level as to bulge it up and break it, and no matter how good a job may have been done in laying walls and concrete it soon begins to leak, on account of the water pressure, which increases as the water runs, owing to freshets in the river, and soon the basement is in as bad condition as if no effort had been made to keep the water out. With the planking, however, held down by the weight of the building there is no chance of yielding to water pressure. The concrete remains substantially as laid, perfectly water-tight, and it is a job that can be depended upon as long as the building will last, because the planking buried beneath the concrete away from the air, and the alternate conditions of being wet and dry, would probably never rot.

When an attempt is made to put down a basement in that shape there should be no effort made to run down a pit in addition, as too much difficulty would be experienced in so connecting the top of the pit with the bottom of the basement as to make it water-tight all around. In all such cases it will be better to make just so much of a basement as will be necessary to do the work in, and put an ordinary foundation only under the remainder of the building. Whatever size of basement may be made it should be about twelve feet deep, measuring from the floor of the elevator, which is usually about four feet above the surface of the ground. The bottom of the principal stand of elevators, or stands, as the case may be, must rest on the bottom or floor of the basement. For corn shelling purposes the sheller must be set close to



the stand of elevators into which it discharges, and high enough from the floor to allow it to empty freely without choking. To supply the sheller a short stand of elevators must be provided, the boot of which will be connected with the discharge of the dump, and the head with the mouth of the sheller. The corn is then passed from the dump into the elevator, raised by it and thrown into the sheller, instead of dumped directly into the sheller, as is the common and best practice where conditions will permit.

The reason for using the short elevator is very obvious. Without it there could be little or no dumping room made, because the sheller sets so high, as it is obliged to in order to free itself, unless the outside driveway is made exceedingly high, which is not practicable, if it can be avoided.

The cups in the corn elevator should be of large size, never less than sixteen inches long, and made of heavy, firm material, with sharp edges, something on the pressed steel bucket order. The object is to have the cups strong enough and sharp enough to cut an ear of corn in two, if it becomes necessary to do so.

The connection between the dump and boot of the elevator should be made very tight, and the same should be done between the head of the elevator and sheller, and between the sheller and boot of the main elevator. In fact, all connections should be made as close as mechanical skill can do it to prevent the corn scattering out. It can be done if a little care is exercised. Of all the filthy places imaginable a pit or basement half full of partially decayed corn or other grain is the worst, yet in a majority of our small and half-attended-to elevators just such a condition will be found.

The short elevator should be entirely within the basement limits, which it can be if it be twelve feet deep. The bottom pulley should be only sixteen inches in diameter and head pulley twenty-four inches. For so short a stand of elevators a pulley of that size will be found large enough to do the work, and do it well. The speed will be about the same as for other elevators, say thirty-eight revolutions per minute. It may be driven with a chain belt off the same shaft that drives the sheller unless the speed is too great. In such cases a counter-shaft must be introduced, to be driven by a belt off the main shaft, and it drive the elevator with a chain. There need be no apprehension about the successful working of an elevator for raising ear corn to the sheller; if properly constructed and connected there can be no better plan for feeding shellers. Still there is no occasion for the extra expense and trouble in putting such an elevator into the building where the conditions admit of deep basements or sheller pits, which allow the sheller to sit low enough to feed it directly from the dump hopper, and still allow large dumping room. However, the two plans are before you, and it is optional with all interested as to which they adopt. When compelled to adopt the method here described on account of surface water, that is, if any are willing to incur the expense of it, it will be understood that the driveway will have to be higher than I have heretofore advised, but it cannot be avoided in order to leave ample dump room, which is very desirable in all small country elevators. I would therefore run the driveway as high as convenience and circumstances will permit, and leave all the hopper room that can, in that case, be obtained. It will often be needed in sections where much corn is grown and handled.

It was only an ear of corn, but it made trouble. A report from the governor of Yunnan shows the barbarism that still lingers in some of the country districts of that province. The villagers have a horrible custom of burning to death any man caught stealing corn or fruit in the fields. A man named Peng Cha Sheng was going down to watch his own field, and on the way he plucked an ear of corn from a neighbor's patch of maize. He was seized and brought before the village assembly, which decided that he must be burnt to death, though his mother tried to ransom him by the offer of her whole property. The unfortunate man was burned alive, his own mother being compelled to set fire to the fagots so as to prevent her lodging a complaint afterward, which, however, turned out an unsuccessful precaution. Of the two ring-leaders in the outrage, one has died in prison, and the other has been decapitated. The incident shows the excessive poverty in which the people must live, for it would be impossible that such a custom should exist except in a country where every ear of corn was as valuable as a man's life.—*London Figaro.*



#### Issued on May 14, 1889.

**BALING PRESS.**—Virgil L. Williams, Cartersville, Ga. (No model.) No. 403,498. Serial No. 268,610. Filed March 27, 1888.

**BELT-HOLE COVER.**—William E. Sharples, Fall River, Mass., assignor of one-half to the Geo. W. Stafford Manufacturing Company, Providence, R. I. (No model.) No. 403,890. Serial No. 291,171. Filed Nov. 17, 1888.

**BELT TIGHTENER.**—Edwin Benjamin, South Evanston, Ill., assignor to the Benjamin Machine Company of Illinois. (No model.) No. 403,454. Serial No. 298,488. Filed Feb. 2, 1889.

**CAR STARTER.**—Bartholomew Wistar and Miles Pettet, Wellington, Ontario, Canada. (No model.) No. 403,167. Serial No. 302,783. Filed March 11, 1889.

**DRIVE CHAIN.**—Thomas H. McCray, Chicago, Ill., assignor of one-half to Alexander H. Gunn, same place. (Model.) No. 403,127. Serial No. 284,395. Filed Sept. 3, 1888.

**DRIVE CHAIN.**—Thomas H. McCray, Chicago, Ill., assignor of one-half to Alexander H. Gunn, same place. (Model.) No. 403,128. Serial No. 284,396. Filed Sept. 3, 1888.

**GRAIN DRIER.**—Lewis Borland, San Francisco, Cal. (No model.) No. 403,411. Serial No. 275,204. Filed May 26, 1888.

**GRAIN DRIER.**—Lewis Borland, San Francisco, Cal. (No model.) No. 403,412. Serial No. 286,900. Filed Oct. 1, 1888.

**GRAIN METER.**—Archibald Stewart, Keota, Iowa. (No model.) No. 403,396. Serial No. 289,924. Filed Nov. 3, 1888.

**GRAIN SCOURER.**—Heinrich Seck, Dresden, Saxony, Germany. (No model.) No. 403,389. Serial No. 286,384. Filed Sept. 25, 1888.

**GRINDING MILL.**—Etienne Derbec, San Francisco, Cal. (No model.) No. 403,421. Serial No. 292,138. Filed Nov. 28, 1888.

**AUTOMATIC GRAIN WEIGHER.**—John Henry, Ardoch, Dak. (No model.) No. 403,189. Serial No. 275,296. Filed May 28, 1888.

**HORSE POWER.**—John C. Pruet, El Dorado Springs, Mo. (No model.) No. 403,371. Serial No. 257,885. Filed Dec. 14, 1887.

**HORSE POWER.**—John C. Pruet, El Dorado Springs, Mo. (No model.) No. 403,372. Serial No. 293,203. Filed Jan. 31, 1889.

#### Issued on May 21, 1889.

**BAG HOLDER.**—Frank A. Brown, Angelica, N. Y. (No model.) No. 403,641. Serial No. 272,130. Filed April 28, 1888.

**DRIVE CHAIN.**—David J. Sheldrick, Columbus, Ohio. (Model.) No. 403,893. Serial No. 265,623. Filed Feb. 28, 1888.

**GRAIN WEIGHING SCALES.**—Phares R. Grabill, Millersburg, Pa. (Model.) No. 403,748. Serial No. 282,897. Filed Aug. 16, 1888.

**GRAIN WEIGHING APPARATUS.**—James R. Creighton, Altoona, Dak. (No model.) No. 403,519. Serial No. 281,601. Filed July 31, 1888.

**BALING PRESS.**—Thomas J. Corning, San Jose, Cal. (No model.) No. 403,738. Serial No. 298,016. Filed Jan. 29, 1889.

**BALING PRESS.**—Leigh H. Hallam, Belton, Tex. (No model.) No. 403,662. Serial No. 287,788. Filed Oct. 11, 1888.

**DEVICE FOR STARTING CARS.**—Edward Fales, Cleveland, Ohio. (No model.) No. 403,582. Serial No. 282,105. Filed Aug. 6, 1888.

**FRICTION CLUTCH.**—Helen C. Crowell, Erie, Pa. (No model.) No. 403,739. Serial No. 278,561. Filed June 29, 1888.

**MAGNETIC SEPARATOR.**—Gurdon Conkling, Glens Falls, N. Y. (No model.) No. 403,576. Serial No. 283,532. Filed Aug. 23, 1888.

**SEPARATOR.**—Sinclair Stuart, Plainfield, N. J. (No model.) No. 403,704. Serial No. 258,459. Filed Dec. 20, 1887.

#### Issued on May 28, 1889.

**DRIVE CHAIN.**—George G. F. Boswell, Indianapolis, Ind., assignor of two-fifths to Joseph E. Boswell and James F. Boswell, both of same place. (Model.) No. 403,909. Serial No. 295,133. Filed Jan. 2, 1889.

**AUTOMATIC GRAIN METER.**—Earl H. Reynolds, Prophetstown, Ill. (No model.) No. 404,225. Serial No. 273,873. Filed May 14, 1888.

**AUTOMATIC GRAIN SCALES.**—Charles H. Cooley, Hartford, Conn., assignor to The Pratt & Whitney Company, same place. (No model.) No. 403,988. Serial No. 262,850. Filed Feb. 3, 1888.

**COTTON SEED SEPARATOR.**—James S. Zerbe, Hartwell, Ohio, assignor by mesne assignments, to the National Cotton Seed Oil and Huller Company, Memphis, Tenn. (No model.) No. 404,066. Serial No. 203,613. Filed May 29, 1886.

**AUTOMATIC GRAIN WEIGHING MACHINE.**—Laughlin M. Buchanan, Elmira, Ill. (No model.) No. 404,257. Serial No. 290,382. Filed Nov. 9, 1888.

#### Issued on June 4, 1889.

**DRIVING AND BELT-SHIFTING MECHANISM.**—Edwin R. Hyde, Springfield, Mass. (No model.) No. 404,709. Serial No. 262,608. Filed Feb. 1, 1888.

**ELEVATOR AND CONVEYOR.**—Charles J. Seymour, Brookline, Mass. (No model.) No. 404,660. Serial No. 283,209. Filed Aug. 20, 1888.

**GRAIN CLEANING MACHINE.**—James F. Wilson, Orange, assignor to Thomas William Carr, Marrickville, New South Wales. (No model.) No. 404,456. Serial No. 288,287. Filed Oct. 13, 1888. Patented in New South Wales, Oct. 26, 1886; in South Australia, March 28, 1888, and in Victoria May 25, 1888.

**GRAIN PRESS.**—William Preston, Brooklyn, N. Y., assignor of one-half to James J. Kelley, same place. (No model.) No. 404,655. Serial No. 283,030. Filed Aug. 17, 1888.

**COTTON SEED HULLER.**—William R. Fee, Cincinnati, and James S. Zerbe, Hartwell, Ohio, assignors, by mesne assignments, to the National Cotton Seed Oil and Huller Company, Memphis, Tenn. (No model.) No. 404,696. Serial No. 176,022. Filed Sept. 2, 1885.

#### Issued on June 11, 1889.

**BALING PRESS.**—Fred. W. Anderson, Maple Plain, Minn. (No model.) No. 404,815. Serial No. 274,441. Filed May 19, 1888.

**BALING PRESS.**—John H. Howard, James H. Howard and Edward T. Bonsfield, Bedford, England. (No model.) No. 404,972. Serial No. 280,267. Filed July 18, 1888. Patented in France July 2, 1888. No. 191,561; in Belgium July 6, 1888, No. 82,463; in New South Wales Aug. 20, 1888, No. 879; in Italy Sept. 30, 1888, XXII, 23,799, XLVII, 134, and in Canada Oct. 10, 1888, No. 29,965.

**APPARATUS FOR TRANSFERRING, WEIGHING AND DELIVERING BAGS OF GRAIN.**—William E. Fergusson, Montclair, N. J. (No model.) No. 405,088. Serial No. 299,735. Filed Feb. 13, 1889.

**GRAIN CLEANER.**—Benjamin P. Barney, Harper, Kan. (No model.) No. 405,670. Serial No. 297,304. Filed Jan. 23, 1889.

**GRAIN CLEANING MACHINE.**—Joseph Leaser, Wheaton, Minn. (No model.) No. 405,168. Serial No. 283,642. Filed Aug. 24, 1888.

**GRAIN DRIER.**—James Hill, Newark, N. J. (No model.) No. 405,214. Serial No. 283,350. Filed Aug. 21, 1888.

**MAGNETIC MACHINE FOR REMOVING MINERAL SUBSTANCES FROM GRAIN.**—Martin L. Mowrer, Dayton, Ohio. (No model.) No. 405,045. Serial No. 280,008. Filed July 14, 1888.

**GRINDING MILL.**—Francois Quenehen and Achille Vansteenkiste, Brussels, Belgium. (No model.) No. 405,177. Serial No. 239,153. Filed May 23, 1887. Patented in Belgium March 18, 1887, No. 76,744; in England June 13, 1887, No. 8,492; in Germany June 18, 1887, No. 42,784; in France June 30, 1887, No. 184,535; in Italy Dec. 31, 1887, XIV, 209, XXI, 22,427, and in Austria-Hungary May 1, 1888, No. 11,104 and No. 50,307.

Large quantities of wheat are being shipped from California to Australia.





The Hawley Wheat Separator Co. has been organized at Roanoke, Va., with a capital stock of \$15,000. R. H. Day is president, and W. T. Watkins is secretary and treasurer.

The Jeffrey Mfg. Co. of Columbus, Ohio, report a steady demand for their elevating and conveying machinery. They are running their works full time, and the prospects are good.

The McCrery Drive Chain Company has been incorporated at Chicago with a capital stock of \$500,000. The incorporators are Simon P. Douthart, Julius Wahl and Alexander H. Gunn.

The heavy "Hercules" Power Car Pullers are being put in at elevators, coal mines, breweries, etc., all over the country. Three of these machines were sent to the Argentine Republic, S. A., recently, on order from one party. They are manufactured by the E. H. Pease Manufacturing Company, Racine, Wis.

The Canton Steel Roofing Co. of Canton, Ohio, has got settled in its new quarters, and now has one of the largest plants of the kind in the United States. They are enjoying a good trade, and their business for the first quarter of 1889 was almost one-third larger than for the first quarter of 1888. They have a very nice catalogue they will send to any one sending them their address.

The Avery Elevator Bucket Co., Cleveland, Ohio, are just completing a large addition to their already large plant. They will have two buildings on the lake front, each 75x280 feet, with switch from Lake Shore Railroad. Their elevator buckets have in a short time acquired a national reputation. They are now making an improvement, viz., corrugated seamless stamped bucket, the strength, capacity and durability of which is almost beyond computation.

The Chicago representatives of the New York Belting and Packing Co., W. D. Allen & Co., have just issued a new and attractive catalogue, containing descriptions of a full line of vulcanized rubber goods, including belting, packing and hose. The cover, a buff tint, is very attractive, and is printed in red and bronze. A view of the company's extensive warehouse and salesrooms, 151 Lake street, is shown on the back. It is a pamphlet of forty pages, profusely illustrated, typographically correct in every particular, and great care and much labor have evidently been bestowed upon its preparation and production. Its possession cannot fail to be of benefit to those interested in the line of goods which W. D. Allen & Co. handle.

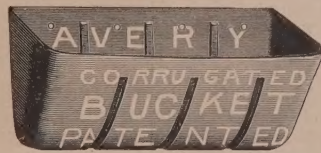
The Charter Gas Engine Company, Sterling, Ill., write us: "In the last six weeks we have received and filled orders for 'Charters' to be used for eleven distinct and separate purposes, as follows: Feed mills, grain elevators, tile factory, dynamos, manufactory, feather machines, printing presses, plumber's shop; 'merry-go round,' marble shop, street cars, and in some of the cases several engines are ordered. A recent morning mail brought us orders for two 36-horse power and one 10-horse power engine. Very fair for one mail. We have been working fourteen hours per day for over six weeks, and are from two to five weeks behind our orders on some sizes. Have received the contract for a large oatmeal mill this month, and have a good line of orders for wire rope transmission supplies, pulleys, shafting, gearing, portable mills, etc."

The farmers of Southern Illinois have begun harvesting their wheat. The next few months will be busy ones for the harvest hands, the twine trust and Board of Trade men all over the broad area from Cairo to Winnipeg. After the wheat has been gathered, what will Old Hutch do with it? Perhaps he hasn't decided yet.—*Chicago News.*

"Against all these depressing facts and influences," says the *Economist*, after summarizing the bearish features of the wheat market, "there are but two things to encourage American holders, namely, the price is about as low for the new crop features as it ought to be if the crop were safely harvested, and the visible supply of cash grain is quite light."

## THE CORRUGATED ELEVATOR BUCKET.

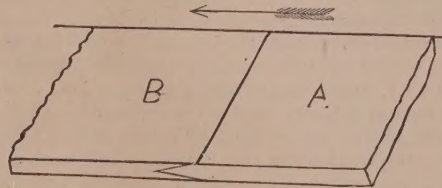
The Avery Stamping Company of Cleveland, Ohio, successors to the Avery Elevator Bucket Company of the same city, have lately purchased of W. H. Caldwell of Chicago, Ill. (the patentee and manufacturer of the celebrated Caldwell Steel Screw Conveyor), his patents for Corrugated Elevator Buckets and other sheet metal goods. The object sought by Mr. Caldwell's invention was the means whereby any article manufactured from sheet metals may be made stiff and rigid, thereby doing away with cross braces, that are found in the old style elevator buckets, and which interfere so with the filling and emptying. Respecting this corrugation the Avery Stamping Company say: "This corrugation will be a great benefit and improvement, especially in elevator buckets, as ear corn, slag or any rough or ragged material can be dipped up easily, with less friction on a full load, as there are no braces to catch or seams to give way, that cause spilling



material down the back leg, as all elevator men well know, braces retard the emptying of elevator buckets. This bucket will make a great saving in time, labor and expense, while doing twice as much work as buckets heretofore used. For large elevators, as in Chicago, Buffalo, Duluth, and in many of the other principal grain ports, where speed and quick work is desired, the new bucket will take the place of the old style now used. They will be made of steel, perfectly seamless, without rivets, solder or seams, any parts of which are so liable to give way. Another great feature is that they will not be expensive in price, and will outwork three of the ordinary buckets now used. The sizes will be 10x5½, 11x6, 12x6½, 14x6½, 16x6½, 18x7, and 20x7, made of suitable gauges of steel, giving them with the corrugation, the full strength and stiffness desired. These buckets will be considerably lighter than the common ones now used, while they will be much stronger, and parties interested in improving their mills or elevators desiring samples and prices can have same by applying to the Avery Stamping Company, or any first-class mill furnisher or mill supply house."

## SUBSTITUTE FOR RIVETS AND LACE IN BELTS.

First make a solution of cement as follows: One pint of soft water; 18 ounces of Irish glue; 1 ounce of isinglass; ¼ ounce sulphuric ether; ¼ ounce orange shellac; 1 gill 95 per cent. alcohol; 2 ounces dry white lead. Have druggist put ether, shellac and alcohol in a bottle and



dissolve. Have water in a kettle, hot, then add your glues, thoroughly dissolving them. Then add white lead and contents of bottle. Thin the cement to a proper consistency when you wish to use and apply it hot. The belt should be properly cut so as to make a splice, whose thickness should not exceed the thickness of the belt itself.

I would recommend a splice made as follows: Cut one end of the belt, as shown in the diagram marked A, and the other end, as shown in the diagram, marked B, taking care to make a first-class job of the same; this done, apply the cement and clamp the joint firmly in suitable clamps, and leave the same to harden, after which place the belt on the pulleys where it is expected to run, taking care to run the belt in the direction shown by the arrow in the above diagram, so that the joint will not easily get mutilated or broken. I believe this will give excellent satisfaction, especially if the belt is to run over small pulleys where lace or rivets give trouble and do not stand.—*The Wood-Worker.*

## INDIAN CORN, OR MAIZE.

DR. GEORGE THURBER IN "AMERICAN AGRICULTURIST."

This is the great grain crop of America. It is with the exception of grass the greatest crop of our agriculture, and lies at the foundation of successful farming. If one's produce is to be sold as milk, butter, eggs or meat, he starts with a crop of corn. No one plant serves so many uses, whether as the plant itself or as the ripened grain. It is the one great gift to this country, and every farmer, as he plants his corn, should do so with a grateful heart, and a resolution that the best return he can make for this noble gift is to preserve it from deterioration and transmit it to coming generations in an improved form.

Corn is one of the most variable of plants, and is more readily affected by its surroundings, by climate, soil, etc., than any other cultivated plant. Like most other cultivated grains, it is not known in the wild or native state. It was grown by the aborigines from near the present Canada border to far south of the equator, and its occurrence in the tombs of the mound builders and those of the Peruvian Incas show that it was in cultivation long before the discovery of this country by Columbus. There have been attempts to give a Chinese or other Asiatic origin to corn, but a rigid examination of the evidence fails to show that it was known anywhere in the Old World previous to the discovery of the New. There is a variety called "Kansas Cow Corn," or "Oregon Corn," in which each kernel is enveloped in a separate husk, instead of the usual husk surrounding the whole ear. It has been claimed that this was the primitive plant, but no one has ever seen it growing wild.

The first effect of removing a variety from a warm to a cooler situation is upon the stature of the plant, there being variations in the stalk from eighteen inches to eighteen feet in height, and in the season from three to nine months in which to perfect the seed. This inherent tendency to variation and to adjust itself to new conditions allows the farmer to provide himself with a kind of corn best suited to not only his district but to the soil of his particular farm, and many growers have each a variety which he would not exchange for any other.

Corn varies in two ways—by this natural tendency of the plant, and by fertilizing one kind by the pollen of another, and thus combining in one crop the dissimilar qualities of two sorts. Most of the desirable varieties are obtained by selecting seed from those stalks which show desirable qualities. Seed corn should be selected and marked long before it is ripe, while the plant shows its habit of growth, time of maturity, etc. The crossing of two varieties is seldom practiced; indeed, the farmer is more interested in preventing a cross than in making one. Such varieties, made by artificial crossing, are not very permanent. The "King Philip" corn was produced in this way, and for several years was highly esteemed, until one season, when those who planted it, found they had a crop of two distinct sorts. The two varieties which made the "King Philip" had separated, and a crop of each was the result.

As an article of human consumption, corn is the chief bread food of many tropical and semi-tropical countries. It is to the Mexican what rice is to the Chinaman. The exclusive use of corn impairs the digestion, which leads to the excessive use of red pepper (*Chile colorado*) at every meal.

The varieties of corn are innumerable, but these are grouped in races of several varieties in common. Thus there are the "dent" corns, in which each kind has a more or less well-marked depression or dent in the outer end. Sweet corn is a well-marked race, in which there are many varieties differing in time of maturity, size of ears, etc., but all agreeing in the lack of starch in the kernel. The sugar, glucose, etc., which in ordinary corn are transformed into starch, in these remain unchanged when the kernels ripen, and they are consequently very sweet and sugary. Roasted or parched corn, ground and mixed with sugar and spices, forms the "pinole" of the Mexicans. Stirred in water to form a sort of gruel, it is a pleasant and nutritious food much used by Mexicans and travelers. "Pinole" is served as a ration in the Mexican army.

Pop-corn is another distinct race, of which the varieties are many, and very unlike in size and general appearance. When gradually heated, the oil in the kernels becomes converted into gas, which by its explosion produces the phenomenon called "popping." In the most perfect examples the grain is completely reversed, the starch cooked to a beautiful whiteness, expanded to many times its



original size, and is tender, crisp and palatable. By the aid of syrups cooked to the candy point, the confectioners make the popped corn into balls which are very popular with children.

### INCREASED DEMAND FOR HOME-GROWN BARLEY.

Of late, owing to the discovery of a new method of brewing, considerable has been said and written about the cultivation of barley in the United States. Heretofore brewers have used a great quantity of Canadian barley, because it suited their purpose better than home-grown, but now that by the new method home-grown barley will suit their purpose as well as the Canadian, they will cease to import, and the cultivation of barley in the United States will receive a new impetus.

This will to a great extent shut Canadian barley out of this country. The Minister of Agriculture for Ontario foreseeing this event, is looking about for a new market for this grain, which is one of the most important products of the province, and some time ago he sent a quantity to the government's agent in Liverpool, to be distributed among the brewers of England for trial. A number of letters have been received from prominent English brewers and maltsters to whom samples were sent for trial, and a majority of them do not consider it to be up to the necessary standard. However, it may be that in more favorable years the barley will be of such quality that the English brewers can use it. Mr. Drury, the Ontario Minister of Agriculture, thinks that in a season more favorable than the last a better barley would be produced.

During the last few years a number of new varieties of barley have been introduced in this country in addition to the old-fashioned two-rowed and six-rowed barley, and it is very probable that during the next few years a great number of new varieties will be introduced. Hereafter farmers will undoubtedly devote more time to the cultivation of barley, and the elevator men should see to it that they have seed of a good quality and variety.

Mansbury barley is a variety of German origin that has become very popular on account of its greater productiveness, heavy weight and value for malting. It is also a few days later in ripening than the common six-rowed, and can thus be put in after the wheat harvest. This in winter wheat growing localities is an important advantage. Its faults are that it has a longish grain, with a beard which adheres so closely that it can only be separated from the berry by an extra attachment to the thresher. This beard makes it hard to get even, plump grains to weigh, standard weight, say forty-eight pounds to the bushel. Brewers grumble some at this, but whenever they have become used to Mansbury barley they like it. There is still another bastard barley, a cross between the common two-rowed and six-rowed. It is a very heavy barley—often weighs fifty-two pounds per bushel—but it is utterly worthless for malting. It is grown to some extent for feeding, and is probably the best of all barley for that purpose, as it yields well and weighs heavily.

### HOW THE CORNER WAS BROKEN.

A story is told of Apollonius of Tyana, who lived about the time of Christ, that while he was traveling in Cilicia lecturing on good behavior and similar subjects, he made a great hit at one place by pitching into the grain merchants who had run a corner on grain when there was a short crop, and forced the people to pay exorbitant prices. He also wrote the following advice to grain speculators on a tablet in the market place: "The earth, the common mother of all, is just. But, ye being unjust, would make her a bountiful mother to yourselves alone. Leave off your dishonest traffic, or ye shall be no longer permitted to live." It seems very remarkable, but nevertheless it is true, that these grain men did as they were bid, and they didn't make any fuss about it either. They suddenly became very conscientious, or else were superstitious; then too, the people had made preparations to cook some of them and it was a stroke of good policy to yield. Since then things have changed. Now the law forbids, public sentiment threatens through the columns of the newspapers, but all in vain; the corners are run and some of the grain speculators, the shorts, are roasted, but not by the people; the bulls are supreme. Should Apollonius appear among the grain speculators of to day and try to put a stop to their operations, they would soon have him converted to their ways or else get a corner on his wind.

## Points and Figures.

On June 8 Indianapolis elevators contained 66,558 bushels of grain, against 209,331 bushels for the corresponding day of 1888.

Offerings of corn by Chicago grain men are so liberal as to greatly depress the Canadian markets for native feeding stuffs.

Fifty cars of wheat were received at Minneapolis the other day from a Dakota farmer who held it all last winter rather than sell last fall, under the impression that it would be worth more this spring. His loss on the transaction was \$6,000 to \$8,000.

The bucket-shop case of Frank Bradley for selling grain on margins recently came up before Judge Ernston at Cincinnati, and the defendant was bound over to the grand jury. This action was taken through the efforts of the defense to have the cases tested in the higher courts.

When a party in Milwaukee,  
Bent on speculation blind,  
Gets the firm conviction rooted  
In the center of his mind,  
That he'll drive the best of traders  
As he would a drove of shoats,  
Let him heed this friendly pointer:  
"Tackle anything but oats!"

—Daily Business.

It is said that in Southern Minnesota some farmers grow wheat and oats mixed together in about equal proportions. They claim that fields sown with the mixed crop—succotash, as they call it—are less liable to be attacked by chinch bugs, and also that they get as much wheat as if they had sown wheat separately, and that the quality is better. Then they get ten to fifteen bushels of oats to an acre besides.

The principal points of increase in the visible supply of grain for the week ending June 8 were: Oswego, 50,000 bushels wheat; on canal, 120,000 wheat, 514,600 corn; and on lakes, 188,486 wheat, and 621,484 corn. The principal points decrease: Chicago, 146,468 bushels wheat, 210,813 corn; Duluth, 235,402 wheat; Minneapolis, 123,831 wheat; New York and afloat, 705,290 wheat, 337,700 corn; St. Louis and afloat, 167,848 wheat; and Toledo, 100,815 wheat, 40,104 corn.

Speaking of the growing wheat crop the St. Paul *Journal of Commerce* says: "Raising a wheat crop is an uncertainty until the wheat is in the granary. No child is more tender or subject to more ills than the wheat plant. It has to go through teething, whooping cough, mumps, measles, scarlet fever, chicken pox, and a host of other regular dangers, besides a lot of incidentals, bumps, falls, bruises, coughs, colds, and summer complaint. Any one is liable to end it, but it is liable to pass through all safely."

Through the kindness of T. C. Friedlander, the obliging Secretary of the San Francisco Produce Exchange, we have received a copy of the report of the Exchange, showing the amount of cereals out of farmers' hands at different points in California on June 1. Of wheat there was a total of 2,092,430 centals, against 10,819,630 centals on Dec. 1, 1889, and 3,881,960 centals on July 1, 1888. The amount of barley at these points on June 1 was 2,052,630 centals, against 4,087,050 centals on Dec. 1, 1888, and 2,063,450 centals on July 1, 1888.

Philadelphia has a new game called "razzle-dazzle," in which the names of different cereals figure quite conspicuously. The *Inquirer* of that city says: "The cards with the quotations on them and marked 'corn,' 'oats,' 'rye,' 'wheat' and 'barley,' respectively, are shuffled and placed in the wheel. This turns by electricity. The game is a pure out and out gamble, but it is said to be perfectly fair. All sorts of people go to the office and all sit trembling in fear of a police descent. The players are generally very seedy. The owners are not."

The Minneapolis *Market Record* of recent date says the Northwest wheat crop promises an average yield. The ground is too dry in many parts of North Dakota and North Minnesota to bring the crop forward in the best shape. The cold weather has retarded the growth in all sections, but there is no cause of alarm in that, as the plant appears to be stooling well where there has been enough moisture. The weeds have grown faster than wheat, but some of the worst of them, including wild buckwheat, have been set back by frost more than wheat has. The south half of Minnesota and South Dakota

show considerably better than average conditions, while the north half of Minnesota and North Dakota do not show any better than average. More rains are needed in the North. The promise now indicates about 90,000,000 bushels for Minnesota and the Dakotas.

The grain buyers say that at last the corn crop of last year is beginning to move. The farmers can hold it no longer, and now sell for no more money than they could have received last fall. Farmers who bring corn to Lincoln receive 20 cents per bushel for it. In some parts of the state the price is even lower.—*Nebraska State Journal*.

Late reports from Kansas place the wheat acreage in that state at 1,388,799 acres, and the crop is estimated at 22,220,784 bushels. This is 6,000,000 bushels over last year's crop and more than has been harvested any year since 1884. The area sown to oats was 1,916,551 acres, about 235,000 acres above last year's acreage. The crop is estimated at 57,496,530 bushels; this exceeds last year's crop by 15,000,000 bushels. The hay crop is estimated at 3,000,000 tons. The corn crop at 160,000,000 bushels. This is less than 2,000,000 bushels in excess of last year's crop.

The *Farmers' Review* of this week says: The latest reports show no improvement in the condition of winter wheat. Kansas maintains the high average of two weeks ago, and Ohio and Kentucky a correspondingly low one, the condition of these states remaining about the same from week to week. In Illinois and Michigan there has been a slight decline, and in Indiana a falling off of about 10 per cent. The condition of spring wheat is comparatively unchanged in Nebraska, Iowa and Minnesota, but has improved in Dakota about 5 per cent, and declined in Illinois about 8 per cent.

The first receipts of new wheat in this market last year was July 2. It came from Virginia, and sold at \$1 per bushel. The first receipts at Baltimore, June 22. The first at St. Louis, June 30; it came from McDowell, Mo. The first at Chicago was on July 12, from Jackson county, Ill. It inspected No. 2 red, and sold at 78. The first carload of new wheat received there in 1887 was on July 1, and in 1886, June 29. The first receipt of spring wheat at Chicago last year was on July 20; it came from Northern Kansas.—*New York Evening Post*.

The grain trade here are waking up to the opportunity and necessity of enlarging the trading in "futures" in this market, and are devising ways and means for the distribution of quotations in the principal cities of this country and Canada.—*New York Produce Exchange Reporter*. This waking process has been going on at New York for a long time, and they have constantly had committees devising ways and means for the distribution of quotations, but as yet the different cities have not expressed any desire to have New York quotations, and until they do the devising of ways and means will continue without avail.

A. J. Grove, grain inspector for the San Francisco Produce Exchange Call Board Association, reports the stocks of grain in the warehouses of that city on June 1 were as follows:

	Mar. 1.	April 1.	May 1.	June 1.
Wheat, tons.....	17,450	12,377	9,443	4,018
Barley.....	39,236	37,017	33,399	31,199
Oats.....	4,233	4,472	4,649	4,603
Corn.....	400	325	275	856

The quantity of wheat in the warehouses at Porto Costa on the 1st was 14,391 tons, making a total of 18,319 tons in all Call Board warehouses, a decrease of 9,229 tons during the month of May. A year ago there was 83,331 tons wheat in Call Board warehouses.

The following are the receipts of California cereals at San Francisco from the beginning of the harvest year to June 1, compared with the corresponding period in the previous harvest year:

	July 1, '87, to Jun. 2, '88.	July 1, '88, to Jun. 1, '89.
Flour, qr. sks.....	3,513,339	3,962,300
Wheat, cts.....	8,202,231	12,751,263
Barley, cts.....	2,245,157	2,536,439
Oats, cts.....	152,909	126,541
Corn, sks.....	231,697	151,563
Rye, sks.....	17,433	25,520
Buckwheat, sks.....	3,054	2,581

During the first eleven months of the crop year ending July 1, 745,052 centals of wheat, 14,398 centals of barley, 503,306 centals of oats, no corn, and 1,033 sacks of rye were received at San Francisco from points outside the state, against 1,170,591 centals of wheat, 75 centals of barley, 262,536 centals of oats, 12,590 centals of corn, and 5,289 sacks of rye for the corresponding period of the crop year ending July 1, 1888.



## ITEMS FROM ABROAD

The prospects are that Spain will have an abundant harvest.

An effort is being made to have grain sold by weight in England.

Algiers will have a better crop of wheat this year than ever before.

It is claimed that the Argentine Republic will export over 20,000,000 bushels of corn.

Late dispatches from England, Germany and France state that the crop prospects are excellent.

Not long ago wheat was selling at 6s.—almost \$1.50—in Melbourne, Australia, but it receded to 5s. 8d.

During 1888 the exports of wheat from Roumania were the largest on record, being 31,200,000 bushels, against 18,400,000 bushels in 1887.

Chili's wheat crop is reported as good in the southern districts, but poor in the northern. The country will have some wheat for export.

During the three weeks ending June 1 India shipped 1,340,000 bushels of wheat to the United Kingdom and 1,040,000 bushels to the Continent.

Considerable wheat is being shipped to South America from Russia. If we had as good steamship service as Europe has, we could easily get all of this trade.

Recently 92,000 bushels of wheat were shipped from Odessa to Rio Janeiro, and but a short time before a cargo was shipped from the same port to Montevideo.

Reports from Austria complain of serious damage from rain and hail, and Hungarian advices are not uniformly favorable, though a fine crop of rye is expected.

In South Russia the wheat and rye crops are not in a satisfactory condition, and it is expected that these crops will fall considerably below last year's production.

Ocean steamers will no longer have to anchor twelve miles from shore at Buenos Ayres, or pay excessive light-erage, as the government has built a basin for them.

India's average wheat exports for the past five years have been 34,080,000 bushels, and it is thought the exports for this year will fall considerably below the average.

A steamer recently loaded at Bombay, India, with a cargo of wheat for shipment to Australia. This is the first cargo of wheat ever exported from India to Australia.

It is said that the English Government have drafted a bill for establishing a Board of Agriculture which will be placed under a minister who will be a member of the cabinet.

Late reports from Magdalena, state of Senora, Mexico, state that a big crop has been harvested, and that the governor is offering one dollar for every ton of wheat exported.

Last year Russia produced 246,877,000 bushels of wheat; 780,800,000 bushels of rye; 905,280,000 bushels of oats; 166,144,000 bushels of barley, and 57,700,000 bushels of buckwheat.

Elevators are being rapidly constructed at a number of ports on the Black Sea. It is claimed that this will give an impetus to the Russian grain trade, and act as a check to the American trade.

During the week ending June 1 the United Kingdom imported 317,000 quarters of wheat and 149,000 quarters of corn, against 286,000 quarters of wheat and 150,000 quarters of corn for the preceding week.

Roumania continues to export considerable wheat and rye. Last year she exported 4,071,700 quarters of wheat and 1,040,000 quarters of rye, against 2,300,000 quarters of wheat and 640,000 quarters of rye for 1887.

The *Miller* of London, in a recent issue says that the summer food wants of the United Kingdom will be nearly 4,000,000 bushels in excess of the estimated supply, and the granary stocks must be almost depleted before the end of July.

The International Agricultural Congress will be opened in Paris July 12 to discuss the agricultural situation and other kindred subjects. In connection with the agricultural depression it is proposed to study its causes, its effects, and the remedial measures suggested.

Walter T. Griffin, commercial agent at Limoges, calls attention to the fact that France stands second to the United States as a wheat-growing country. France being discouraged with the vine is giving more and more attention to the production of her own food supply.

Advices from Antwerp are to the effect that the grain trade there is under the influences of the consequences of this year's frightful American bear and bull comedy. A total loss of confidence prevails, both with importers and millers; business which in regular times would have been in full swing is now lifeless, everybody buying from hand-to-mouth, and it seems every day more probable that Antwerp this season will not become a big importer

as in former years, but purchase only for strictest wants, any speculative enterprise, even the most legitimate, having completely disappeared.—*New York Evening Post*.

Reports from India state that in the Ganjam district the prices of grain and food are so high as to be prohibitory to the poorer classes, and unless rain falls soon it is believed the present scarcity will develop into a famine. In some parts the grain crops are below the average.

A settler in South Australia gives in one of the colonial journals an estimate of what it costs him to produce an acre of wheat. He says he can carry on farming with profit and pleasure with an average of eight bushels per acre sold at 2s. 6d. per bushel, or at the rate of £1 per acre.

According to an English paper Russia produced 29,925,000 quarters of wheat last year, against 37,690,000 quarters in 1887, and 18,900,000 quarters in 1886. For last year the winter wheat yield was 139 per cent. of an average, and the spring yield was 103 per cent. of an average yield.

An exchange says Brazil has been a grain exporting country for some time. In 1887, which is the last year for which we have the official figures, she produced 18,371,667 bushels of wheat and exported 8,810,233 bushels of wheat and flour. The same year she produced 18,896,571 bushels of corn and exported 14,244,640 bushels.

The *Mark Lane Express*, in its weekly review of the British grain trade for the week ending June 1, says: "The weather promises good harvests. English wheat has declined 6d. Farmers despairing of higher prices, are delivering 10 per cent. more than usual. Good prospects both at home and abroad have knocked the bottom out of the markets."

*Dornbusch's List*, by post, reports the passage, through the Dardanelles, of 38 steamers loaded with wheat, destined as follows: Bordeaux 1; Belgium 2; United Kingdom 5; Rochefort 1; Marseilles 5; Holland 3; Spain 1; Greece 4; Italy 2; Gibraltar for orders 14. Since New Year's Day 435 steamers and 166 sailers laden with wheat have passed through the Hellespont.

According to a recent report of the Agricultural Department of England that country produced 68,482,089 bushels of barley last year, the average yield being 32.84 bushels per acre, which is 1.18 bushels per acre below the ordinary yield. The yield of oats was 37.24 bushels per acre, exceeding the yield of the preceding year by 2.50 bushels per acre. The aggregate crop was 107,344,099 bushels.

## Press Comment.

## MEAN FLING AT ST. LOUIS.

All the grain elevators in St. Louis—that is, the entire five of them—are to be consolidated under one management. This is brought about in the interest of economy. One man can attend to the grain trade of St. Louis as well as five.—*Chicago Times*.

## TAIL END MAY BE LARGE.

The consumption of wheat in this country is estimated at four and a half bushels per capita. Some estimates of our population are as high as 65,000,000, which would give a consumption of 290,000,000 bushels. A saving of one-fourth in bread consumption would then reduce the aggregate 72,500,000 bushels and a saving of one-eighth would reduce it 36,250,000 bushels. There are dealers who talk of scarcity in this country. When corn, rye and vegetables are cheap and wheat dear in this country, the tail end of a short crop may be surprisingly large.—*Chicago Tribune*.

## INDIAN AND RUSSIAN WHEAT.

When complaints are made of the condition in which grain is frequently received from India, it should not be forgotten that precisely the same may be said of many cargoes of Russian wheat. Earth clods, seeds, foreign grain, shriveled berries—are not these all well known to those who handle Russian grain? Like causes produce like effects all the world over, and lands in which patriarchal systems of tillage still remain, in which modern machinery is almost unknown, can hardly be expected to export wheat in the condition of the best American and Canadian shipments.—*The Miller, London, Eng*

## THE TRUE POLIOY.

The Chicago Board of Trade has taken an unwise and shortsighted course in its attempt to deprive the "bucket shops" of the use of its quotations by withholding them from all but its own members. The true policy is to seek the utmost publicity for these quotations through channels that allow least danger of manipulation for private ends. Any action that puts a premium on secret and unauthorized methods of transmittal through irresponsible hands, or interferes with prompt verification and speedy detection of any dishonest tampering with the figures, must operate to the injury of those in whose supposed interest the action is taken. The purpose of the Board is to prevent the "bucket shops" from doing business that would otherwise be transacted through the exchanges; but, while it is quite certain that this effort will fail, it is also to be remembered that the present wide distribution

of these quotations is an important factor in increasing the business of the Chicago exchanges.—*New York Commercial Bulletin*.

## THE BOARD'S EXPERIMENT.

The Chicago Board of Trade is trying the experiment of bringing the world to its feet. A few weeks will determine whether the Chicago Board of Trade or the world is on top. Such experiments come high, but we must have them to relieve the tedium of life in a great and prosperous grain center.—*Chicago Times*.

## THE BOARD WILL REPENT.

The Chicago Board of Trade has officially announced through its board of directors that after sunset 31st inst. no official quotations will be given except to members of the Board. This is the last expiring effort of the disgraced spouse who wants to divorce the bucket shops. It is of doubtful utility, and nobody else's business, but we have an impression that the ice of her own making won't be thick enough for a slide. If New York will have the spunk to drop at once her old-fashioned barge load and turn to dealing in 5,000-bushel lots, she is likely to get enough trade to cause an onerous repentance to creep into "lakeside musings."—*Baltimore Journal of Commerce*.

## PREVENTS LEGITIMATE BUSINESS.

Every now and then the rural legislators are seized with a spasm of virtue, and then they proceed to embody that virtue in the form of a law. When the virtue is most excessive the resulting law is the most impotent and ineffective. Such a law has just been enacted in Missouri. It is intended to break up gambling in grain options, but if it could be enforced it would break up all operations of any value that are effected by means of merchants' exchanges and boards of trade. It is like the prohibitory law—intended to make men good in spite of themselves. It proposes to prevent people, under the guise of legitimate operations, from gambling in differences of prices, but in trying to accomplish this it prevents even legitimate business operations.—*Chicago Herald*.

## THE ROOM TRADERS.

The cause for the decline in business among the commission men on the Chicago Board of Trade is evidently but partly due to the influence of bucket shops. "Room traders" are believed to be a much greater detriment in the influence of their power upon speculation emanating from outside parties. Through this influence, it has been declared, there is not a speculative house on the Board whose books for any recent year can show gains for customers equal to the losses, which means that there has been a steady process of depletion of resources of those who have been trading in Chicago in late years. If this declaration is well founded, it must be apparent that the abatement of the speculative fever, and its consequent effect upon the revenues of Board of Trade men, have come from causes having their origin within the Board. If this be so, is the desired relief to be expected to result from the heroic treatment of the case now provided for by the Board?—*Cincinnati Price Current*.

## PERSONAL

George Brock, a grain buyer at Manly, N. b., is missing and his friends claim foul play.

Mr. Charles L. Hutchinson, ex-president of the Chicago Board of Trade, has returned from his trip abroad.

Mr. L. Welch of Minneapolis has accepted the position of manager of the Texas Mill and Elevator Co. at Corsicana, Tex.

Mr. McGaw, formerly of the firm of McGaw & Hastings, will buy grain in Manitoba for the Keewatin Milling Company.

Mr. F. H. Peavey, who is with the company that is building a system of elevators on the Pacific coast, has gone to Europe.

J. N. Huston, of Connersville, Ind., who was recently appointed Treasurer of the United States, was at one time engaged in the grain business at Delavan, Ill., with J. H. McKinney. The style of the firm was McKinney & Huston.

Col. Maxwell has been presented with a beautiful water color testimonial, by the members of the Executive Committee of the Cincinnati Chamber of Commerce, in recognition of his services rendered during the dedication of the Exchange's new building.

Georgetown, Wis., is to have a new grain elevator as soon as the new railroad reaches that place. The building will be 160x40 and three stories high. It will be supplied with all the latest and most improved machinery. It is proposed to put in the pneumatic system, so that cars can be loaded in short order. The grain will be elevated to the top of the building, emptied into a large receiver and forced by compressed air through a spout into a car on the track.



## ELEVATOR AND GRAIN NEWS

F. F. Clark is remodeling his elevator at Farmer City, Ill.

C. W. Cass, grain dealer at Plaistow, N. H., has sold out.

Runkle Bros. are building an elevator at Mount Airy, Md.

The cotton-seed oil mill at Elberton, Ga., will soon be enlarged.

A. Matthews, grain dealer at Ballinger, Tex., has taken a partner.

A cotton-seed oil mill will probably be erected at Batesburg, S. C.

A cotton-seed oil mill will probably be erected at Lexington, Ga.

The contract has been let for a cotton-seed oil mill at Monroe, Ga.

Shelby & Abbott have started a broom factory at Waukegan, Wis.

A cotton-seed oil mill will probably be established at Lamar, S. C.

Cussingham & Wyley is the style of a new grain firm at Anchor, Ill.

Omaha, Neb., has been receiving an enormous amount of grain of late.

The Enterprise Mill Company of St. Jacobs, Ill., will build an elevator.

Nathaniel Morse, hay and grain dealer at Dedham, Mass., has sold out.

It is reported that a cotton-seed oil mill will be built at Rocky Mount, N. C.

The Greenville Cotton-Seed Oil Mills at Greenville, S. C., will be enlarged.

Lyons & Mereness, lumber and grain dealers at Glidden, Iowa, have sold out.

J. F. Earl & Co. have purchased the elevator of Cain Bros., at Alton, Kan.

Ayrault & Dow, grain dealers at Perry, N. Y., have dissolved partnership.

Sioux Falls, Dak., is making an effort to have a distillery established there.

Gratton & Co., grain dealers at Montreal, Quebec, have dissolved partnership.

It is reported that a \$50,000 cotton-seed oil mill will be built at Jackson, Miss.

The grain firm of J. T. Boynton & Co. of Byron, N. Y., has been dissolved.

John Glass and others will probably erect a cotton seed oil mill at Camden, S. C.

H. C. Neal & Co., grain commission dealers of Corsicana, Tex., have sold out.

John Coleman has embarked in the grain and lumber business at Bunceton, Mo.

The Farmers' Alliance will probably establish a cotton-seed oil mill at Rome, Ga.

J. A. Robinson and others will build a cotton-seed oil mill at Alexander City, Ala.

George E. Rogers, lumber and grain dealer at Sterling, Ill., has made an assignment.

W. B. Beeson will build a cotton-seed oil mill and fertilizer factory at Keener, Ala.

Ransom, Ill., has a new grain and lumber firm. The style of it is Summers & Ward.

Miles Hardy, Jr., contemplates the erection of a cotton-seed oil mill at Soapstone, Ala.

R. O. Barksdale and others will probably erect a cotton-seed oil mill at Waynesboro, Ga.

Law & Pearson, grain and lumber dealers at Neepawa, Man., have dissolved partnership.

The Cumberland Valley Railroad Company will build a grain elevator at Winchester, Va.

The Farmers' Alliance of Spartanburg, S. C., will probably build a cotton-seed oil mill.

A stock company is being organized at Gibson's Station, N. C., to erect a cotton-seed oil mill; \$20,000 has been subscribed.

Henry Thompson, the seventh and last of the men indicted for stealing wheat from the Lake Erie & Western Railroad Company at Indianapolis, Ind., has been ar-

rested. Six of the thieves have already been convicted and sent to the penitentiary.

The Blaker Milling Company are preparing to build a 40,000-bushel elevator at Pleasanton, Kan.

Betz & Crawford, grain and lumber dealers at Keswick, Iowa, have been succeeded by J. A. Betz.

The North Texas Mill and Elevator Co., are building a 150,000-bushel elevator at McKinney, Tex.

Boyer & Heard are building an elevator 30x70 feet, adjoining their new mill at Hagerstown, Md.

E. E. Fulton & Co., grain dealers at Dayton, Ohio, have been succeeded by the Miami Elevator Co.

Frank Achorn & Co. are preparing to build a steam mill and elevator at Waldoboro, Me.

C. F. Rockwell & Co., grain commission dealers at Buffalo, N. Y., have dissolved partnership.

Rices, Minn., was visited by a destructive fire June 10. The elevator was saved with great difficulty.

John and Chas. B. Maginn's contemplate the erection of a cotton-seed oil mill at New Orleans, La.

Eben G. Robinson & Co., hay and grain dealers at Providence, R. I., have made an assignment.

The American Starch Manufacturing Company of Columbus, Ohio, has failed. Liabilities \$100,000.

M. G. Good & Co., grain dealers at Marengo, Iowa, have been succeeded by Peterson & Schneider.

Shepherd, Watson & Co., grain commission dealers of Minneapolis, Minn., have dissolved partnership.

B. C. Kinard, J. M. Thaxton, W. C. Kinard and others will erect a cotton-seed oil mill at Towaliga, Ga.

Oliver Bros. of Columbia, S. C., will probably erect a 150-ton cotton-seed oil mill at Birmingham, Ala.

The Farmers' Alliance of Seneca, S. C., have organized a company, and will build a cotton seed oil mill.

A grain elevator is to be erected at Martinsburg, W. Va., by the Cumberland Valley Railroad Company.

A cotton seed oil mill will probably be established at Monroe, La., to be operated independent of the trust.

A cotton-seed oil mill to cost \$26,000 will be erected at Wilmington, N. C. J. H. Post can give information.

A company has been organized at Union, S. C., with a capital stock of \$15,000, to build a cotton-seed oil mill.

A stock company is being organized at Sellers, S. C., to build a cotton-seed oil mill. Capital stock will be \$20,000.

Joseph Loud & Co., grain and coal dealers at Weymouth, Mass., have been succeeded by A. J. Richards & Sons.

Some time ago a cargo of 68,000 bushels of choice red winter wheat was shipped from New York to Montevideo.

Eight thousand tons of barley in call board warehouses at San Francisco were recently condemned on account of weevil.

Stephen Nairn intends to build an elevator, to be operated in connection with his oatmeal mill at Winnipeg, Manitoba.

The George Bauernschmidt Brewing Company has been incorporated at Baltimore, Md., with a capital stock of \$200,000.

The Stanton Milling Co. of Stanton, Ill., will erect a 20,000-bushel iron clad elevator, 30x40 feet; also a 150-barrel mill.

The Abbeville Cotton-Seed Oil and Fertilizer Co. has been organized at Abbeville, S. C., with a capital stock of \$20,000.

Vliet & Young, grain dealers at Newark, N. J., have dissolved partnership. Mr. L. S. Young succeeds to the business.

The Board of Trade of Newberry, S. C., is taking steps toward the organization of a company to build a cotton seed oil mill.

Parr & Johnston is the style of a new grain firm at Baltimore, Md. It is composed of Charles E. Parr and Thomas Johnston.

G. W. Piper of Covell, Ill., has started a store, and will buy grain at the new station on the L. E. & W. R. R., just west of Bloomington.

Almost 20,000 bushels of grain were received at Mansfield, Ill., the last week of May. Of this amount Mr. M. Kilion received over half.

John Wilson, Joseph Jett and Charles Wilson have organized a company with a capital of \$200,000, to build a large distillery at Pekin, Ill.

The National Linseed Oil Co. will erect the finest linseed oil mill in the world at Duluth, Minn. They will also erect a flaxseed elevator.

A. F. Bizzell and others will build a cotton-seed oil mill at Laurensburg, N. C. A company has been organized with a capital stock of \$25,000.

The St. Paul Linseed Oil Company will put new machinery in its mill at St. Paul, Minn., and start it as soon as the new flax crop is harvested. Owing to the lack of

storage facilities the mill has been idle some time. When the mill starts up again it will have a capacity to handle 500,000 bushels of flaxseed a year.

About 150 farmers of Watonwan county, Minn., formed a co-operative society, and have built a large warehouse at Madelia for holding their own grain.

T. H. Taylor & Co. of Chatham, Ont., have built a 40,000-bushel elevator near their mill. Power is transmitted to it from the mill by a wire rope.

Payne & McCormick, the new grain firm of Emden, Ill., are meeting with great success. One day recently they received over 6,000 bushels of corn.

Baltimore grain merchants have asked the Northern Central Railroad to erect an elevator for oats, and provide hay storage accommodations in that city.

W. Rorison, whose elevator at Carberry, Man., was burned recently, will rebuild it, capacity to be 60,000 bushels. Work will soon be commenced.

Mr. J. Bredehoff has been arrested at Fergus Falls, Minn., for stealing wheat. His son was sent to the penitentiary some time ago for the same crime.

The Anti-Trust Mfg. Co. has been incorporated at Talbotton, Ga., with a capital stock of \$20,000, and will build a cotton-seed oil mill and fertilizer factory.

Pressy, Wheeler & Co., grain commission dealers of Minneapolis, Minn., have united with Charles E. Lewis. The style of the firm is Pressy, Wheeler & Lewis.

The Gate City Oil Co. of Atlanta, Ga., have purchased a site for a 125-ton cotton-seed oil mill. They expect to have it in operation by the middle of September.

R. D. Butler, grain and lumber dealer at Random Lake, Wis., has sold his lumber business, and hereafter will give his entire attention to his grain business.

Van Inwegen & Reed, whose elevator at Hastings, Minn., burned last March, have secured a building, and put in machinery for the manufacture of corn goods and feed.

The Birmingham Brewing Co. has been organized at Birmingham, Ala., with a capital stock of \$100,000. A site has been purchased, and buildings will be erected at once.

The Excelsior Distilling Company has been incorporated at Pekin, Ill., with a capital stock of \$200,000. The incorporators are John Wilson, J. S. Jett and C. C. Wilson.

The Sowle Elevator Company of Minneapolis, Minn., were recently before the State Board of Railroad and Warehouse Commissioners, complaining of the dockage of wheat.

W. A. Merritt, G. D. Walker, J. B. Watson and others have organized a company at Ridge Spring, S. C., with a capital stock of \$12,000, and will build a 20-ton cotton-seed oil mill.

W. R. Doty, S. Cathcart, W. B. Creight and others have organized a company at Winstboro, S. C., with a capital of \$6,000, and will build a cotton seed oil mill and fertilizer factory.

It is reported that the Hon. J. J. Randall of Winona, Minn., who it was thought would succeed Chief Grain Inspector James, will be appointed warden of the Minnesota State prison.

During the month of May Chicago received 24,068 cars of grain, against 21,248 cars in May, 1888, and 23,090 cars in May, 1887. During April this year only 12,990 cars were received.

An elevator company will probably be formed at Winnipeg, Man., to build a system of small elevators in Western Canada. This would greatly encourage grain growing in that section.

The C. A. Gambrill Mfg. Co. have commenced the erection of a 150,000-bushel elevator at Ellicott City, Md. It will be of wood, 72x66 feet and 90 feet high, and covered with corrugated iron.

E. Conery & Son, J. H. Keller and others, have organized the Independent Cotton Oil Co. at New Orleans, La., with a capital stock of \$150,000, and they will soon build a cotton-seed oil mill.

It is reported that Percy McGeorge of Philadelphia, Pa., and others will build a cotton-seed oil mill at Anniston, Ala. They have organized a stock company with a capital stock of \$100,000.

Of late the grain business at Anchor, Ill., has been booming. Mr. C. D. Morris has during the last six weeks shipped nearly 200,000 bushels of grain for the Middle Division Elevator Company.

J. A. Dubois & Co. have purchased the McClure Roller Mills and elevator at Sauk Center, Minn., which have been idle for some time, and will buy and ship grain in addition to operating the mill.

The Marlboro Cotton Seed Oil Co. has been organized at Bennettsville, S. C., by C. S. McCall, J. F. Everett, H. H. Newton and others, with a capital stock of \$20,000, to manufacture cotton-seed oil.

The Central Elevator Company of Cincinnati, Ohio, recently converted a large flouring mill into a first-class elevator. The work was done by the E. H. Pease Mfg. Co., of Racine, Wis., which also furnished all the ma-



chinery, including cleaners, shellers and one of their largest size Excelsior Oat Clippers, which is also a combined separator and grader.

The William Lea & Sons Co.'s elevator at New Castle, Del., has been closed for the season. During March, April and May nearly 250,000 bushels of corn were shipped to New England ports.

Samuel Twesby, who formerly had charge of the Northern Pacific Railway Company's elevator at Belle Prairie, Minn., has sued the company for \$342, the amount of commission due him.

Wilbur M. Cromwell, R. F. Munro, G. H. Brown and W. T. Wells have organized the American Cotton-Seed Oil Co. at Newark, N. J., to build cotton-seed oil mills in the South. Capital stock, \$1,000,000.

The St. Anthony and Dakota Elevator Company of St. Paul, Minn., have filed a certificate of amendment to their articles of incorporation, increasing the number of directors of the company from three to six.

One day recently the stocks of wheat at Cleveland, Ohio, were 38,000 bushels, and in order to obtain a small vessel load several elevators had to be visited. As a grain market Cleveland seems to be declining.

The Golden Gate Distilling Co. has been incorporated at San Francisco, Cal., with a capital stock of \$300,000. The directors are J. A. Spencer, George Miller, Henry Ebbinghausen, Isaac and Samuel Wormser.

Work on the large grain elevator of Mr. Garrett Watts at Louisville, Ky., is being rapidly pushed forward. The elevator will be completed in time for the next crop. Lexington will then have two grain elevators.

The Kauffman Milling Company of St. Louis, Mo., have let the contract to J. A. Stewart & Co. of that city, for the erection of a new grain elevator along the tracks of the Missouri Pacific Railway. It will cost \$21,000.

C. W. Swanson & Co., general store and grain dealers at Stanton, Iowa, have dissolved partnership. Swanson & Anderson have taken charge of the store, and A. F. Miller & Co. have succeeded to the grain business.

The Calumet Distilling Company has been incorporated at Chicago, Ill., with a capital of \$250,000. The incorporators are Isidor Baumgart, J. W. Sheridan, Ignatz Stein, Adolph Stein, Charles Stein and J. J. Warde.

The Rice Elevator Company has been incorporated, with a capital of \$50,000, to deal in grain and all kinds of seed, at Paxton, Ill. The incorporators are Mary A. Rice, W. M. Wilson, F. A. Thompson and John H. Moffett.

The E. H. Pease Mfg. Co., Racine, Wis., are happy over a recent trial of their famous "Excelsior" Dustless Receiving Separator in competition with two other prominent makes of machines, the result of which was to give the blue ribbon to the "Excelsior."

John Watson of 38 Ferry street, New York, will erect a large grain elevator in Brooklyn. It will be 115x169 and 73 feet high, built of brick with gravel roof, and will cost \$150,000. The contract for the building has been let.

The United Cotton-Seed Oil Co., of Philadelphia, Pa., have purchased a site at Spartanburg, S. C., and will build a cotton-seed oil mill. They will also build a mill at Rock Hill, S. C. They have a capital stock of \$100,000.

W. B. Millmeed, G. A. Barksdale, J. T. Simmons, W. L. Durst, J. C. Maxwell and T. T. Riley have organized a company at Greenwood, S. C., with a capital stock of \$20,000, and will build a cotton-seed oil mill and fertilizer factory.

Borden, Selleck & Co. of Chicago report sales of Harrison Conveyor to Albert E. Neeley Elevator Co., Chicago; Messrs. Sutherland & Dewey, Cincinnati, Ohio; Central Elevator Co., Cincinnati, and Messrs. Wilson & Scott, Vail, Iowa.

John Earl, who has been in the grain business at Schoolcraft, Mich., for a number of years, has assigned to Addison Brown; liabilities \$50,000 to \$100,000, with small assets. The cause of his failure was disastrous speculations in wheat.

Winnipeg, Man., is not satisfied with its system of weighing and inspecting wheat, and the Board of Trade of that city recently sent its secretary to Duluth to get pointers on the system there in use. It is reported that Manitoba will have a better crop than ever before.

Two carloads of new wheat were received at San Francisco May 24, and sold at \$1.37½ and \$1.40 per cental. The present California harvest is nine days ahead of any previous one, and the prospects are excellent. It is claimed that the crop will amount to 60,000,000 or 70,000,000 bushels.

In the suit of Charles S. Neal against the Baltimore Elevator Company of Baltimore, Md., the jury rendered a verdict of \$6,000 for the plaintiff. Neal was injured by one of the company's machines, so that he was incapacitated both mentally and physically. A motion for a new trial has been filed.

On June 7 the elevators at Duluth, Minn., contained 1,526,809 bushels of wheat, and at the opening of the season they contained 2,228,789 bushels. It was predicted that the elevators would be empty early in the season, but this has failed to come true. The small shipments are said to be caused by the situation of the carrying trade. Vesselsmen claim it does not pay to take small

lots of wheat when they can get full loads of ore. Large shipments are expected as soon as the ore trade becomes dull.

The Pacific Elevator Co., which was organized some months ago by F. H. Peavey & Co., of Minneapolis, Minn., have commenced work on some of the elevators which they proposed to build along the line of the Oregon Railway and Navigation Co. They will have capacities varying from 25,000 to 75,000 bushels.

Mr. John F. Lahart of Minneapolis, Minn., has filed an answer in the suit brought against him by his former partner, Preston B. Mann. Mann claims that through Lahart's machinations he lost money on the sale of wheat. This the latter denies, and in a cross-bill declares that he sold 49,000 bushels for Mann at a profit of \$5,000, which amount he was to receive in consideration of an agreement with Mann. But that sum was not received, continues Mann; neither was \$6,831.25, which Mann used for him. In all, therefore, he claims that his former partner owes him \$11,831.25.

## Fires, Casualties, Etc.

Mr. Harbaugh's elevator at Linwood, Kan., was burned recently.

John McDonald's elevator at Frankfort Station, Ill., was burned May 23. Loss, \$15,000.

Jonathan Bacon, a prominent grain merchant of Champaign, Ill., died of apoplexy May 22.

W. H. Kough, grain dealer at Newport, Pa., is one of the heaviest losers by the flood at that place.

The plant of the Bergdoll Brewing Company at Johnstown, Pa., was entirely swept away by the flood.

I. J. Michner a grain dealer of Chestnut, Ill., died on the morning of May 25 from paralysis of the heart.

Wilson White of the firm of Wilson White & Co., dealers in grain bags at San Francisco, Cal., is dead.

The Mankato Linseed Oil Company of Mankato, Minn., suffered a heavy loss by fire on the night of June 10.

Mr. James McDougall, one of the original members and founders of the Montreal Corn Exchange, is dead.

The Northern Pacific Railroad Company's 60,000-bushel elevator at Davenport, Dak., was burned on the morning of May 22.

Mr. Van R. Rowe, who built the first elevator in Davenport, Iowa, died May 7 at Summit, N. J., aged seventy-seven years.

Mr. Wm. S. Cobb, at one time one of the managers of the New York Produce Exchange, died recently, aged forty-three years.

Alex Thompson, a well-known grain buyer of Manitoba, was caught in the belting at J. A. Mitchell's elevator in Winnipeg May 14, and sustained injuries which it was thought would prove fatal.

The Northwestern Brewery at Stillwater, Minn., owned by Frank Aiple, was burned on the morning of May 30. Loss, \$22,000; insurance, \$8,500.

L. B. Holt, a prominent grain dealer of Stockton, Cal., was thrown from his buggy and received injuries from which he died a few days afterward.

Miller & Weaver's elevator at North Grove, Ind., was burned June 5. Loss, \$10,000; insurance, \$2,000. The fire is supposed to have been started by tramps.

Several warehouses along the line of the Chesapeake & Ohio Canal were carried away by the recent flood. One at Mercersville contained 4,000 bushels of wheat.

James Brass, while working on the foundation for the new elevator at Ellicott City, Md., a large boulder fell upon him, and his left leg and right arm were broken.

Mr. Joseph Jones of the grain commission firm of Joseph Jones & Sons of this city, died at his residence in this city recently of heart disease, aged seventy-five years.

The third floor of W. P. Mirick's malt house at Lyons, N. Y., on which was stored 3,000 bushels of barley, gave way on the morning of May 16, and descending carried the next floor down with it.

Rogan's elevator at Arcadia, Neb., was burned on the morning of June 4, together with all its contents. Loss \$6,000; insurance \$2,500. There is little doubt but that it was the work of an incendiary.

The main building of J. G. Gotfredson & Sons' brewery at Kenosha, Wis., was burned shortly after 12 o'clock on the night of June 5, together with \$4,000 worth of barley. Loss on building \$5,000. Insurance on plant \$10,000, of which \$3,500 was on main building.

Henry Linebarger's elevator at Stanford, Ill., was destroyed by fire on the morning of May 15, together with 8,000 bushels of oats. The elevator was valued at about \$5,000, and the grain was worth \$1,600. Insurance on both was \$4,500. The fire started in the engine room. Its origin is somewhat mysterious, as the fire was all drawn from the boilers the evening before. Several ad-

joining buildings and a double corn crib containing 500 bushels of corn were also burned.

A large elevator at Bryant, Ind., containing 1,500 bushels of oats and a quantity of corn, flour, etc., was burned on the morning of May 20. Loss, \$6,000; insurance, \$1,000. The fire is supposed to have been of incendiary origin.

Mr. W. M. Ogilby, an old member of the Chicago Board of Trade, who recently sold his membership and retired for the sake of his health, is dead. The day preceding his death he was on the trading floor, and talked of feeling better than for a long time before. He was connected with the firm of Gregg, Son & Co.

Gaylord & Jones' elevator at Blair, Neb., was burned about 4 o'clock on the morning of June 3, together with 3,000 bushels of grain and a quantity of chopped feed. When the alarm was given the fire had such a headway that it was impossible to extinguish it. The origin of the fire is a mystery. Total loss, \$8,000; insurance, \$6,000.

Geo. Richner & Co.'s elevator and mill at Mansfield, Ill., were completely destroyed by fire on the night of May 27, together with the office and grain. Loss, \$10,000; insurance, \$1,600. It is supposed the fire originated from a spark from a passing engine. The wind was blowing very hard, and the entire city came near being burned.

Shortly after noon on June 12 fire was discovered in the cupola of F. S. Treat & Co.'s grain elevator at Grinnell, Iowa. The elevator was soon wrapped in flames, and the fire communicated to a number of other buildings, and the total loss was \$150,000. Loss on elevator, \$6,000; insurance, \$2,500. The fire is supposed to have originated from a spark from a passing engine.

Mr. Francis R. Sterrett, a prominent grain dealer of St. Paul, Minn., died very suddenly at his home near that city on the morning of May 12 of heart disease. Mr. Sterrett was born in Pennsylvania in 1834. Coming West he settled at Red Wing, Minn., where he was very successful in business, and at one time was mayor of the city. He moved to St. Paul some years ago, and since then had successfully managed several elevators.

Shortly after midnight on the night of June 1 fire was discovered in the cob house adjoining Jameson Bros.' mill and elevator at Stella, Neb., and in a short time the mill and elevator was wrapped in flames. The building was completely destroyed, together with a carload of grain standing on the side track, 8,000 bushels of grain in the elevator, and a quantity of meal and chop feed. Loss, \$10,000; insurance, \$4,500. The origin of the fire is unknown.

The elevator of the St. Paul Roller Mill Co., at Rush City, Minn., was discovered to be on fire about 10 o'clock on the night of May 18, and was so far advanced that it was impossible to save it. The elevator contained no grain, but was well filled with baled hay. The fire is supposed to have been of incendiary origin, or else caused by careless tramps. The building was one of the best elevators on the road, and cost from \$1,500 to \$2,500. Total loss, \$15,000; insurance small.

Ogilvie's elevator at Boissevain, Manitoba, was completely destroyed by fire on the morning of June 1, together with 20,000 bushels of grain. The fire started in a blacksmith shop about 1:30 A. M., and destroyed a number of business houses. The elevator caught fire several times, but was put out. Finally a large cinder went through the window of the stable adjoining the elevator, and set fire to a lot of hay. This the citizens were unable to put out, and the elevator was soon in ruins.

Samuel Cohee's grain warehouse at May's Station, Ind., about six miles southeast of Knightstown, was completely destroyed by fire on the evening of May 18. Loss on building and machinery, \$2,000; insured for \$1,200. The building contained 4,000 pounds of flour belonging to Mr. Cohee, 2,500 bushels of wheat and 300 bushels of corn owned by Wilkinson, Peden & Co. of Knightstown, and 1,000 bushels of wheat stored by farmers. The stock was entirely destroyed. No insurance. The fire was started by a spark from a passing train.

Isaac H. Reed of the firm of Isaac H. Reed & Co., of New York City, died June 2, aged 84 years. Mr. Reed was one of the oldest members of the Produce Exchange, having taken an active interest in the management of the Exchange at its organization. He was a member of the Board of Managers from 1861 to 1863, and in 1870 was elected president. Resolutions of respect were passed by the Exchange, and the funeral was attended by the President, Board of Managers and a committee of twenty-five members. The business will be conducted as heretofore by his surviving partner, Mr. Jas. R. Turner, who has been the active member of the firm for many years.

We regret to announce that Edward Sanderson of the grain commission firm of Sanderson & Sawyer of Milwaukee, Wis., died May 20 after an illness of two days. Mr. Sanderson had been suffering for a number of years from Bright's disease, but was apparently enjoying good health until returning home from business on the Saturday night preceding his death he was seized with a congestive chill. He was one of the charter members of the Chamber of Commerce, and at one time filled the office of president. He was the principal stockholder of the Phoenix Flouring Mill. He was a man of positive convictions, and although he always refused to be a candidate for political office, he was a prominent politician. He was a man of untiring energy and superior business ability. A wife, son and three daughters survive him.



# THE AMERICAN ELEVATOR AND GRAIN TRADE.

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**A. J. MITCHELL,** - - - Business Manager.  
**HARLEY B. MITCHELL,** - - - Editor.

## ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

## CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., JUNE 15, 1889.

## STATE GRAIN INSPECTION AT ST. LOUIS.

For a number of years grain inspection at St. Louis has been under the control of a board of inspection appointed by the Merchants' Exchange of that city. This, it seems, was not entirely satisfactory to the Missouri state legislators, so they passed a bill to place the grain inspection at St. Louis under the control of the railroad commissioners. State inspection is a very good thing, but as no complaints have been reported against the inspection conducted by the Exchange, it seems that this bill is intended as a direct blow at that body.

The bill provides that the inspection shall be under the control of the railroad commissioners, who shall appoint a chief inspector. The first clause is a direct insult to the Exchange. It stipulates that the chief inspector shall not be connected with the Merchants' Exchange. As he cannot be a member, he will not be admitted to the floor of the Exchange. This shows that there was something more than a mere desire for state inspection that prompted the legislators to pass the bill.

Another clause, which makes the bill all the more obnoxious, is an emergency clause which provides that it shall go into effect the moment the Governor signs it. So the inspectors, the system of inspecting and the grades will probably be changed in the middle of a crop year, which will not only be a great inconvenience to the dealers at St. Louis, but it will retard the grain business of the state, and, in many cases, will prove detrimental to the shipper. While it is possible the inspection may be better than St. Louis has had heretofore, still the change should not have been made until the end of the crop year, when the grades are fixed for the following year. Unexpected changes cannot help but prove detrimental, and it will be some time before buyers and sellers will have any confidence in St. Louis inspection.

Another serious flaw in the bill is that only elevators of over 25,000 bushels' capacity, are regarded as public elevators. This allows the smaller ones to carry on their business as they like, so considerable mixing will in all probability be indulged in. Elevators of larger capacities will not be allowed to do any mixing.

State inspection is preferable to that carried on by a private body, for it gives the grain market

a better standing in other markets. Buyers in other markets will have more confidence in a state inspection, after it has been established, than they could possibly have in a private inspection, even if experience had shown it to be satisfactory. But there is no excuse for legislators making laws in such a helter-skelter way. Representatives of the line of business affected should be consulted and given a chance to show wherein the law is defective and faulty.

## THE CHICAGO BOARD AND THE BUCKET SHOPS.

For over eight years the Chicago Board of Trade has tried to suppress the bucket shops, but without avail. The latest move in this direction was made on May 14, when the Board decided to stop supplying quotations to non-members on May 31. For a time it seemed probable that the Board would succeed in exterminating the bucket shops, but when the time for cutting them off arrived many of the bucket shops had secured injunctions restraining the Board from cutting off the quotations, and so many others received the quotations by underground methods that the action of the Board had little effect on the bucket shops in this city. At outside points the effect was quite different; some received them, while many were unable to get them.

For a number of years the Board has compiled the market quotations and the telegraph companies have paid the Board for the privilege of distributing them. The bucket shops have received continuous quotations at many points throughout the country in spite of the Board, and thus made great inroads on the business of the members. The Board wished to send quotations to customers only, but the courts recently decided that they could not discriminate between persons and must furnish quotations to all who were willing to pay for them.

Now the Board proposes to get rid of the bucket shops by supplying quotations to members only. Many temporary injunctions have been granted, restraining the Board from cutting off the quotations, but as yet the court has not decided whether they will make the injunctions permanent or not. Lengthy arguments have been made by able lawyers on both sides, and the outcome is very uncertain. It may be that the court will take the same view of the quotations as held by the Supreme Court which decided that they were not strictly private property, but were affected with public interest.

If the court does take this view of the case and makes the injunction permanent the Board will have to take some other method of putting a stop to the bucket shops. A member of the Board of Directors recently said that if the present plan did not prove effectual the Board would stop compiling the quotations and no one would receive them. Then any one wishing information concerning the market would have to telegraph to the Board or his agent on the Board.

## LAKE MARINE TRUST.

There seems to be a contagious element in the atmosphere about the east end of Lake Erie that leads the citizens of Buffalo to try and regulate its principal lines of business by forming trusts. The latest scheme originating in that city is to combine the vessel interests of the Great Lakes for the purpose of regulating demurrage, tow bills, freights and kindred subjects. But there is little chance of the scheme succeeding, for the vessel owners at Cleveland and this city are opposed to it.

Several times in years gone by an effort has been made to form a similar combination, and although the formation of a trust has been accomplished, never yet has a trust succeeded in regulating freight and towing charges, demurrage and allied subjects. The failure of so many large trusts, pools and other combinations for the regulation of business has occurred of late that people are beginning to think that no trust can successfully operate any great length of time.

About twenty-five years ago the lake marine

was organized into a trust known as the Lake Navigation Company. It was formed by most of the vessel owners turning over their vessels to the company, and receiving the stock of the company in payment. The trust operated two or three seasons, and then collapsed. Outside parties built boats, and ran them in competition with the trust, and as soon as they were strong enough to prevent the regulation of the charges by the trust, the trust was useless. The project failed, and the vessels were sold at purchaser's price. Subsequently an attempt was made to have one agent do all the chartering, and at another time the agents met daily and fixed the rates.

Other plans were tried, but all failed. Despite this fact the Vessel-Owners' Association of Buffalo wants the owners of lake sailing vessels to form an association for the regulation of rates. The Chicago vessel owners are almost unanimously opposed to the scheme for the simple reason that they feel confident that the scheme would soon fail. A number of the leading vessel owners of Cleveland also refuse to give the scheme their support, so the prospects of even the formation of a trust are very poor. Unless each member was required to deposit a large sum of money, he would break his agreement and carry grain for what he could get. Then, too, as every citizen has the right to navigate the lakes with any kind of a boat, the trust would soon be killed by competition.

## INVESTIGATION OF THE INSPECTION AT MINNEAPOLIS.

The committee of five appointed by the Minneapolis grain men to compare and report upon the grading of wheat during the ten days preceding May 3, as compared with the grading previous to that time, have given it as their opinion that the grades were tightened, but not as much as was claimed by the plaintiffs. The committee examined a number of dealers who claimed that the grades had been changed, and samples of the wheat that had been inspected during the period in question, were shown to verify their statements.

Chief Inspector Clausen stated before the committee that the grades had not been changed since they were established last fall, and the deputy inspectors sustained him in saying that no instructions had been given to make any change in grades. In examining the samples of wheat inspected on the different railroads last fall and this spring the committee found that while the inspection was substantially the same, when there was a difference the sample inspected last fall was the best wheat.

They found many instances of irregular grading and in their report state that there were several short periods during which time the "line" or "skin grade" wheat seemed to be placed in the next lower grade. This tightening up of the grades was particularly noticeable during the period in question, and the committee were unanimous in the conclusion that a tightening up amounting to a practical change of grade on "line" wheat did occur at the time mentioned. They did not think it was intentional on the part of the inspectors, but was simply a reaction from a period in which the grading was more liberal than it should have been.

While many of the dealers are satisfied with the report, still quite a number claim with Inspector Clausen that the evidence adduced did not warrant the findings that there had been any tightening up of "line" grades. It is almost impossible under the present method of inspection to get a perfect grading at all times. Inspector Clausen admits that mistakes are frequently made, but claims that the inspection is as uniform as ordinary human judgment can be expected to make it. Uniformity of grading is most essential, and without it inspection is worthless. The lack of this is exactly what the committee found to be the great cause of nearly all the complaints. Some wheat had been graded too high and some too low.

In their report the committee wisely suggest that any means that can be devised for securing uniformity of grading will be welcomed by all. Minneapolis should have a board of appeal to which parties dissatisfied with the chief inspect-



or's decisions could go with their complaints. The inspectors are provided with samples to guide them in their out inspection, and the warehouses are also supplied with samples of the different grades. It would seem that a reasonable degree of uniformity of grades might be secured by the persistent use of the samples, but if that fails another method of inspection will have to be devised, or else a board of appeal appointed.

### MORTGAGING GROWING GRAIN.

Illinois has a new law which will prove of special interest to the grain dealers of the state. It provides that that the foreclosure of a chattel mortgage must be in open court, so this will probably put an end to the mortgaging of growing grain in this state. In Nebraska the practice has been given a severe blow by a recent decision of the State Supreme Court.

A farmer gave two mortgages on his growing corn to a Mr. Gillihan, and after gathering the corn he sold part of it without the knowledge or consent of Mr. Gillihan, to Kendall & Smith, grain buyers, who knew nothing about the mortgages. As soon as Mr. Gillihan learned of the sale, he brought suit against the grain buyers to recover the amount of the mortgages. The court held that even, if the unsold corn had not been sufficient to pay the mortgages, which was not proved, the plaintiff had no claim whatever upon the buyers. If the buyer of grain had to be liable for encumbrances placed upon it by the seller, the business would be greatly retarded, and every buyer clear down to the consumer would be liable for any encumbrance placed upon it by the seller. Every purchaser, knowing that he was running a risk of being sued, would be slow to buy.

It has been going the rounds of the press, that the court had decided that a mortgage on growing corn was not valid. This is not true. The court holds that the mortgage is a valid lien on the corn, but, at the same time, the mortgagee must take special pains to make the constructive notice effective. He must do something more to protect his lien than to record the mortgage. The court holds that it is the duty of the mortgagee to look after his security, and if a change is made in its character to see that his mortgage still imparts notice of his lien on the grain to third parties. The court adds, that "if the owner of goods stands by and knowingly permits them to be sold as the property of another, he will be estopped from afterward asserting title thereto, and this rule would seem applicable to mortgages of personal property."

It is a very difficult matter to make such mortgages definite, and the court holds that, when harvested, that part of the crop relied upon to satisfy the lien must be placed in a granary by itself. That, and nothing short of it, would give force to the constructive notice of the record. This would give the grain buyer some chance of knowing whether or not he was buying mortgaged corn. There is little probability that Nebraska grain men will hereafter be troubled with suits brought to recover the amount of mortgages on growing grain, for money-lenders will not be willing to run so great a risk.

### MIXING GRAIN IN NEW YORK.

For some time the grain dealers of the West and Northwest have been at a loss to understand why wheat, a number of times during the present crop year, has been quoted at a lower figure in New York City than in this city. The New York State Legislature learned the cause of this unnatural depression and made a law which it is thought will hereafter put a stop to such transactions.

It seems that the elevators at New York and Brooklyn contained about 2,500,000 bushels of stuff they called wheat. The elevators also contained some good No. 2 wheat. Large quantities of good wheat which were sent to that city were greatly deteriorated by being mixed with inferior grain, and the sale of good grain was retarded because buyers understood that the inferior grain would be delivered on contracts for regular No. 2 wheat. It was the depressing influence of this

degraded stuff that has kept the quotations in New York below the relative value of good wheat as determined in the Western markets.

Very naturally the low quotations of New York had a depressing influence upon the grain trade of the West. Foreigners did not want this doctored stuff because it had been so greatly reduced in quality that millers would not take it when they could get any other, and thus the quotations in Great Britain for wheat from the Atlantic ports were depressed. It is said, too, that the grade has been let down at interior points by parties who learned of the action of the New York mixers. This, of course, saved the wheat doctors of the great metropolis the trouble of reducing the grade so much before offering it for export, but it deprived them of the opportunity of making as large a profit by their dishonest practice as they otherwise would have done.

It is impossible to estimate the great injury done to the grain trade of the country by this nefarious course of a few men, and it is high time we were having laws to stop it. It works a great injury to all interested in the trade. Such depreciation in the quality of our wheat injures its reputation abroad, and depresses quotations. At present American wheat is preferred to Russian and Indian because they contain so much foreign matter, but if the doctors at our points of export are allowed to continue reducing the quality before sending it abroad the preference will soon be at an end.

The law which was made by the New York Legislature is said to make it unlawful to sell wheat weighing less than a designated number of pounds to the measured bushel, as well as forbidding the mixture of wheat within the state for the purpose of reducing the grade. While all persons engaged in legitimate grain business throughout the country will favor forbidding of the mixing of wheat the most of them undoubtedly are opposed to any law fixing the minimum weight of a measured bushel of wheat. It is to be hoped that the New York law will be strictly enforced and an end put to the tyranny of the unscrupulous mixers. Honest dealers and others interested in the trade have suffered enough from such depredations, and it is time to call a halt.

### NEW YORK'S LAW AGAINST BUCKET SHOPS.

Some time ago it was learned that New York had no law prohibiting the keeping of bucket shops, so the last Legislature passed a bill amending the Penal Code so as to make this species of gambling unlawful. The Governor has recently signed the bill, and New York now has a law which the officers of the different exchanges think will put an end to the bucket shops.

The members of the different regular exchanges have had some fears that the law would injuriously affect their business, but this is not probable. After signing the bill, Governor Hill wrote out a memorandum stating that in his opinion the law would not injure legitimate business of brokers or exchanges. The law prohibits the keeping of any place for gambling or for making wagers or bets made to depend upon any lot, chance, casualty, unknown or contingent event, or on the future prices of stocks, securities or commodities, or for making contracts for or on account of money or things so bet or wagered.

The regular exchanges are not kept open for any such purpose—in fact, some of them have rules forbidding it. The fact that the members of the regular exchanges sometimes make such bets or wagers does not put the exchanges on the same plane with places which are kept open for such purposes.

Some of the bucket shops in New York City were closed as soon as the proprietors learned that the Rhodes bill had received the Governor's signature. Others are still open, and claim that they do business precisely as legitimate as the regular exchanges. A few have sent out circulars to their customers, notifying them that the bill has become a law, but that it will not interfere with their business in any way, and that orders will be received and executed with the same understanding

hereafter as before—"actual deliveries being in all cases contemplated and understood."

From this it appears the bucket-shop keepers intend to fight the law, and it may be that the exchanges will not be able to exterminate their old enemies as easily as they had anticipated.

### EUROPEAN IMPORTS OF BREAD-STUFFS.

Statistician Dodge, in a recent report, gives the result of an investigation he has been making for the purpose of finding out the possibilities of enlarging our exportation of agricultural products to Europe, and especially those products which now seek foreign markets. Mr. Dodge takes the average exports and imports for a period of ten years, and obtains the deficiency or surplus of each country.

There has been no material decline in the production of wheat in Europe, and the average amount produced is almost enough to supply the home demand. On the average Europe produces 1,200,000,000 bushels of wheat per year. Last year she produced about 30,000,000 bushels in excess of this amount, and the crop of the whole world was only 2,053,692,000 bushels. The amount of wheat annually imported by Europe is about 144,000,000 bushels. Of this amount we supply 95,000,000 bushels. Europe is practically the only wheat market we have, and Mr. Dodge is of the opinion that as long as rye continues to be the staple bread grain of Central and Eastern Europe there is little chance of forcing more wheat upon Europe.

There is very little international trade in oats and barley. Europe produces nearly enough to supply the home demand, only importing 19,000,000 bushels a year. The average amount of oats exported by the United States is 2,500,000 bushels. In 1886 we exported 5,672,000 bushels, but since then our exports have not exceeded 450,000 bushels. Our exports of barley last year only amounted to 550,884 bushels. The preceding year the amount exported was the largest it has been in the last six years, the amount being 1,305,300 bushels. The average for the four years ending 1887 did not exceed 500,000 bushels annually. We import about 7,500,000 bushels annually.

Rye, which is the bread grain of some parts of Europe, is produced in large quantities in several countries. Russia alone produces more bushels of rye than the United States produces of rye and wheat combined, and she exports about 50,000,000 bushels annually, while the average amount exported by the United States is less than 3,000,000 bushels. Last year we only exported 78,783 bushels. In 1887 we exported 357,256 bushels, and for the three years preceding we exported 196,725 bushels, 2,950,558 bushels, and 6,220,206 bushels, respectively. Europe imports less than 1,500,000 bushels.

As compared with the great amount of corn produced, we export very little corn. Our average corn exports amount to 68,000,000 bushels. Of this amount Great Britain gets 62,000,000 bushels. In 1886, 1887 and 1888 we exported 63,655,433 bushels, 40,307,252 bushels, and 24,278,417 bushels, respectively.

Mr. Dodge thinks there can be no increase in the amount of breadstuffs sent to Europe by this country, but thinks we could find a market in Europe for large quantities of other agricultural products in addition to those we now send. At present we export 10 per cent. of our agricultural products, which is a much larger proportion than that exported by any other country. Mr. Dodge suggests no method of increasing our exports of breadstuffs, which would naturally lead one to infer that he does not think the European prejudice against corn can be overcome.

COMMENCING Aug. 1 the Chicago Car Service Association will insert in bills of lading, tariffs, receipts, etc., a clause stating that every carload of freight shall be subject to a minimum charge for rental and trackage of one dollar per car for each day's detention or fractional part of a day after the expiration of forty-eight hours from the time of its arrival at destination.



## Editorial Mention.

THE courts have decided that wheat in store in elevators in Dakota on April 1 must be assessed.

THE Northwestern Brewery of Stillwater, Minn., advertises some damaged malt and hops for sale cheap.

THE Illinois Railroad and Warehouse Commissioners have adopted the same rules and grades and charges for inspection of grain at Joliet as are now in force in this city.

MESSRS. JAS. STEWART & Co. of St. Louis, Mo., advertise in this issue for a competent draughtsman who understands the construction of elevators. A permanent situation is offered to the right kind of a man.

THE Avery Stamping Company of Cleveland, Ohio, send us a handsome copy of their new price list gotten up for traveling salesmen, with space for daily memoranda. They will be pleased to send a copy to any traveling salesman who may desire one.

AN anti-adulteration bill has been passed by the Illinois Legislature which prohibits the adulteration of food. Farmers who mix foreign stuff with the wheat they bring to market should be invited to read the law, for it seems very probable that it will cover their case.

AN effort is now being made by parties in Manitoba, says the *Winnipeg Commercial*, to organize a warehouse company under a charter, the company to devote its efforts solely to the receiving and storing of grain at different points throughout Manitoba and the Canadian Northwest.

It seems that dealing in options is not unlawful in England. At least an English justice decided quite recently that the fact of an American house having called that they had executed an order in grain options and confirmed the cable by postal advice made the transaction a bona fide contract, binding on the buyer in London.

THE Frost Manufacturing Company of Galesburg, Ill., have just issued their "Catalogue D," a copy of which we have received. It contains sixty-eight pages, inside of a suggestive cover, where everything is "Frosted"; there are no flies on it. One feature of the catalogue is a number of illustrations of elevators which they have furnished. They will be pleased to send it to all who will apply for it.

SOME of the conscientious grain men of Toronto, Ont., are calling for a system of inspection at that place. Of late a number of dealers have been receiving carloads of grain which were greatly overloaded, and as they only pay freight on the regulation carload they have an advantage over dealers who will not countenance the acceptance of grain that is invoiced in excess of the amount stated in the bill of lading.

CONSIDERABLE complaint has been made of late against the management of the Illinois Central elevators in this city. It seems there is a scheme to force vessel captains to pay a bonus to get loaded on time. If a vessel arrives at the elevator an hour or two before quitting time the foreman expresses doubt as to whether his men will work or not. If a bonus of \$25 to \$40 is paid by the captain the men are sure to work. The night before Decoration Day two vessels arrived at the Central Elevators a couple of hours before quitting time, but because the captains would not pay the bonus they did not get their grain until five

days afterward. Rain and holidays prevented. There is surely some way in which such pernicious interference with the grain trade of this city can be stopped, and the Chicago Board should see to it that it is stopped.

THE credit of placing the first large dustless grain separator in Russia, and in the first grain elevator of American pattern ever erected in that country, belongs to the E. H. Pease Manufacturing Company. Their Excelsior Separator was selected for this service. The first machine went to Moscow, and has a capacity of 2,000 to 2,500 bushels per hour. Another machine went to St. Petersburg. The Excelsior folks are doing a "Rushin" business.

THE plan for consolidating the St. Louis elevators under one management has finally been consummated, and all the properties except the Advance Elevator in East St. Louis have been transferred. The combine does not intend to increase storage rates, but expects to save several thousand dollars in commissions, switching charges and operating expenses, so the efficiency of the elevator service at St. Louis will be greatly increased without an increased cost.

THE millers of Ontario recently held a meeting at Listowel and decided to form an association, the principal object of which will be to assign districts for buying wheat, to the members of the association, and so reduce competition among buyers that millers will be able to get a larger portion of home grown wheat and at a price below what they would otherwise have to pay. The scheme will undoubtedly prove a failure in districts where grain dealers and buyers are located.

OUR old friend, Captain M. DePuy, wants to sell his canalboats. He says: "On account of the Erie Canal being crippled by excessive elevator charges, aggregating 13-4 cents a bushel; \$280 on one double-header load of wheat, \$315 on corn, and \$525 on oats, I will sell the steamer Ashford and her consort Mayflower, at a great discount. First cost \$9,000; would take \$6,000." The Captain has made a good fight against the elevator ring, but it seems they were too many for him.

ABOUT forty farmers met recently at Fergus Falls, Minn., and after passing resolutions denouncing a number of things, such as "elevator rings," and enterprises which they blindly class as rings formed in opposition to their interests, they commended the work of the Farmers' Alliance, and formed a ring of their own, which will go under the name of The Fifth Congressional District Farmers' Alliance. Before long these narrow-minded farmers will be asking for laws to prohibit all combinations but their own.

ST. LOUIS grain men seem to have a mania for combining of late. The latest organization is among the commission men, who are making a move to form a receivers' and shippers' association on the plan of the one in this city. More than seventy commission men favor the move, so there is no doubt that they will form an association. There is a great deal to be gained by organization that cannot otherwise be obtained, and the St. Louis commission men would find it greatly to their advantage to form the proposed association.

EDWARD S. RICHARDS, the sole surviving member of the firm of Richards, Maynard & Co. of this city, recently brought suit against the Lake Shore & Michigan Southern Railway Company for \$300,000 damages. In 1884 the firm made a contract with the railway company to build a transfer and weighing house at Englewood, near this city, and the railroad company was to weigh and transfer all its grain at this house for the period of ten years. The firm built the house at a cost of \$25,000, and weighed the company's grain until 1886, when they found the company was having a large number of cars weighed at other houses. Mr. Richards brought suit for what he estimated the eight years' receipts would be and

the cost of the transfer house. The case was tried before a jury, but after being out all night the jury failed to agree, so were discharged. The case will be tried again.

AN effort is being made to organize a mutual insurance company to insure vessels sailing from this port. The plan of mutual insurance has proved a success in most every branch of business by which it has been tried, and there are no reasons why it should not prove a success among vesselowners, and reduce the rate of insurance. At least it would be advisable to give the plan a fair trial.

THE Farmers' Mutual Benefit Association of Indiana has resolved that "future dealing in farm products is detrimental to the farmer's interest, by causing values to be unsteady and fluctuating." Another resolution says: "We demand of our legislators to take action in accordance with the above resolution or resign. And we have pledged ourselves not to vote for any legislator that will not favor and vote for such legislation as we have asked for." Probably the mover of the resolution has been holding some wheat for "a dollar fifty" since last fall.

THE Harrison Conveyor is the subject of a neat catalogue of fifty pages, just issued by Messrs. Borden, Selleck & Co. of this city, the manufacturers and sole agents of this device. It illustrates and describes, not only the conveyor itself, but numerous applications of it to the handling of grain, coal, ice, etc. One great feature of this machine is that with it different kinds of material can be handled without mixing. The catalogue, which will be sent to all who write Messrs. Borden, Selleck & Co., contains ample testimonial matter to the value of the conveyor.

THE "trust" idea does not seem to meet with much favor nowadays. Some time ago a man sold the Jute Bag Trust of San Francisco 187,500 grain bags at 7½ cents each. He failed to deliver according to contract. The trust brought suit, and his defense was a motion for a non-suit on the ground that the purchase was part of a scheme to control the market, and therefore was against public policy. The court sustained the defense as valid. It is items like this that almost compel belief in the report of the committee of the New York Senate, that trusts carry within themselves the elements of their own destruction.

HOME-GROWN barley is rapidly taking the place of what we formerly imported from Canada, and the Dominion officials who have charge of the experimental stations are making an effort to introduce a barley that will suit the English market. That which has been raised in Canada heretofore has not proved satisfactory to the English malster, so little of it has been shipped abroad. Recently sample bags of Chavelier barley have been sent all over the Dominion. This is a good malting barley and if the raising of it proves a success in Canada, California barley which has been gaining ground in the English markets of late, will have a strong competitor.

TWO prominent grain merchants of Milwaukee, Wis., L. F. Hodges and S. T. Hyde, have brought suit against a bank of Lanesboro, Minn., to recover amount due them for wheat shipped to the Lanesboro Milling Co. Messrs. Hodges and Hyde claim that in 1884 all the parties made an arrangement by which the milling company was to order such wheat as they desired and the plaintiffs were to deliver it. The bills of lading were to be sent to the bank, to be held until the milling company paid for the grain. Under this agreement the plaintiffs shipped wheat most every day for five years, and collections were made for the same. But between March 8 and April 9, 1889, the bank delivered \$8,601.95 worth of wheat without collecting for it. At the end of this time the milling company failed, and the plaintiffs ask that the bankers be made to pay for the wheat, for surrendering the bills of lading without collecting for the wheat. The cashier of the bank claims that the bills of lading were not delivered, and



that the station agent delivered the wheat to the milling company without requiring the bills of lading.

THE Minnesota Legislature recently appropriated \$2,000 to be used in ridding the state of the grasshoppers, if they made their appearance. It is well they did so, for Prof. Luggar of the State Experimental Station, has found the eggs and young very thick in some counties, and has been plowing them under in hope of smothering them. In some places it was so dry, and the winds were so strong, that he did not succeed in covering them well, but the Professor thinks that he will be able to kill so many of them that they will not be able to do much damage. Every state that has ever been infested with these pests should appropriate money to provide for their extermination should they ever again reappear. It will cost more in the long run to let them have their own way than to provide for a private execution for each and every grasshopper.

ACCORDING to *Bradstreet's* the heaviest monthly decrease in stocks of wheat this year at about 900 points east of the Rocky Mountains out of farmers' hands was in May, the decrease being 7,287,980 bushels, against 9,416,440 bushels for the same month last year. The stocks of wheat at these points on June 1 were 27,075,024 bushels, against 39,020,333 bushels on the same date last year. According to the official report the visible supply of wheat on June 1 was 20,205,816 bushels, against 26,425,426 bushels on June 1, 1888. The stocks of corn increased during May from 15,665,112 bushels to 16,051,946 bushels. On June 1, 1888, the stocks were 10,194,215 bushels. The stocks of oats on June 1 were 9,025,355 bushels, against 7,225,873 bushels on the same date last year, and 9,137,018 bushels on May 1, 1889. During May the stocks of barley decreased from 1,131,639 bushels to 764,681 bushels, and of rye from 1,704,298 bushels to 1,186,435 bushels.

A MONTREAL paper states that Chicago shippers of corn are making such high bids for ocean freights that the shippers of that city are unable to compete, and are therefore obliged to remain idle. It claims to be uttering a widespread dissatisfaction in uttering the sentiment, "Confound those Chicago boys." This "widespread dissatisfaction" must be limited to the boundaries of Montreal, or if it does exist outside, the dissatisfied ones must be of a class who have too much good sense to complain of fair competition, for the only wail that has been heard so far has come from Montreal. For some time Chicago has been receiving in the neighborhood of 1,000 cars of corn a day, and the dealers at this point desiring to ship as much as possible abroad, have bid high for ocean freights. The dealers of Montreal or any other city, if placed in the same position, would do the very same thing. The complaint may have originated with the Montreal grain men, but it sounds more like the invention of some reporter who was greatly in need of something to write about.

It seems almost incredible that in spite of the immense amount of advertising the Bohemian oats swindle gets, farmers will continue to jump into the same old trap. They seem to forget that the same reliable merchant that buys their grain is entitled to their trade and will furnish them with the best seed at the lowest possible price. It is greatly to his interest that they have good crops, and he will naturally procure the best seed. A case was recently decided by an Iowa judge in favor of the giver of a note for Bohemian oats, and since then a jury at Winterset, Iowa, has decided that the giver of the note must pay it. The judge in his instructions to the jury said: "The note was given in consideration of a bond executed and delivered to the maker of the note, and as such was not a gambling contract within the meaning of the statute, while at the same time he strongly denounced the original transaction as a fraud, and stated that the note as between the original parties to the contract would have been void, but having been sold to an innocent purchaser before maturity, it was protected by the

rules of commercial law, and was collectible." There are a good many ways of avoiding the law, and farmers who wish to stay out of the clutches of grain seed swindlers should patronize the grain merchant who buys and ships their products.

THE directors of the Chicago Board of Trade have passed resolutions requesting all warehouses which are recognized as regular warehouses by the Board to discontinue the collection of storage for periods of less than ten days. It seems that the Board discovered that certain warehouses which had been made regular for the storage of grain were stamping upon the face of their receipts statements, that storage had been paid upon the receipts to a date therein named, and frequently the time for which the storage had been paid was a period less than ten days, so that a full rate of extra storage was secured by said stamping, for a period less than an extra storage period. The Board refuses to recognize the changing of receipts and has called upon the houses so doing to stop it.

THE inability of the Grand Trunk Railway to handle all the grain received by it at Georgian Bay ports recently stopped shipments for a time. Since navigation opened, over a hundred cargoes of grain have been received by this road alone, and the Canadian Pacific has received about twenty. The Grand Trunk is building another elevator at Midland which will have a capacity of 300,000 bushels, and will be fitted with machinery capable of handling 6,000 bushels per hour. As soon as this is finished, gluts of grain at the bay elevators will not be so frequent, but it will not be long until the facilities for handling and the storage will have to be greatly increased. The frequent gluts at these ports have caused the shippers as well as the vesselmen to lose considerable, and in justice to themselves they should demand that sufficient facilities to care for the trade be provided.

THE *Omaha Bee* says: "Commissioner Iglehart of the Chicago Freight Bureau has been wrestling with the question of how the St. Louis grain commission men pay their rent and expenses." It seems that large consignments of corn were going to St. Louis from Western Iowa. The lake transportation lines give Chicago an advantage over St. Louis, and as the prices received by the shippers of that district were practically the same in both cities the Commissioner could not understand the cause of the heavy shipments. After investigating the matter, however, he discovered that the St. Louis commission men had been throwing off their commissions and thus securing considerable trade. It may be good policy to do business for nothing once in a while, but in the case of the grain commission men of St. Louis it can hardly be considered so, for, as long as the lakes are open to navigation, Chicago will get the bulk of the grain from Western Iowa. During the winter the Mississippi barge lines give St. Louis the same advantage over Chicago that the latter city has over the former during the period of lake navigation.

## DOTS AND DASHES.

Pipestone, Minn., will have a corn palace next September.

It is claimed that "soft" wheat taken to the Red River Valley, Dakota, becomes No. 1 hard after it is sown a few years.

An Iowa paper estimates that the farmers of that state have \$30,000,000 worth of corn in crib, which they are holding for higher prices.

There are no more tickers on the New York Stock Exchange. Business hereafter will be done exclusively with suckers.—*Chicago Times*.

Several loads of white corn were recently shipped from New York to Venice. They are the first shipments to Venice for a number of years.

The reported acreage of wheat in California is 3,600,000 acres. This is about 500,000 acres in excess of the acreage of 1886, when that state produced 36,165,000 bushels of wheat. Last year the acreage was only 2,351,

300 acres, and the amount produced was 28,451,000 bushels. If California produces 50,000,000 bushels from this year's acreage she will do well.

Wheat in Southwestern Vermont is reported to be in excellent condition. The acreage is larger than it has been before in twenty-five years.

William L. Bull has been elected President of the New York Stock Exchange. It is said that the opposition bears its defeat very good naturedly.

It is claimed that wheat harvesting in Kentucky will commence about June 20, in Southwestern Kansas June 15, and in Central Illinois earlier than usual.

What must be done with the Panama Canal? asks the *Sun* of Sunday, and a wild spontaneous chorus of Frenchmen responds, "Dam it."—*Washington Critic*.

An experimental cargo of 27,000 bushels of flaxseed from South America has been received in this city. It is expected to be followed by other consignments.

According to the report of the Merchants Exchange of Baltimore there were exported from that port during May 654,309 bushels of corn and 87,200 bushels of wheat.

Frequently of late the corn receipts in this city have exceeded one thousand cars per day. This is probably due to the encouraging prospects for a good crop next fall.

Generally true. Jones—"I notice that they call every red-nosed man from Kentucky a Colonel. What are they colonels of?" Brown—"Colonels of corn."—*Chicago Journal*

Husband—I am going into business in Wall street and don't know whether to be a "bull" or a "bear." Wife—Don't worry, dear, you will always be a beast of some kind.—*Epoch*.

Grain and stock gambling has become so much a craze among the women of Cleveland, Ohio, that one Mrs. Clauson has opened a broker's office exclusively for their accommodation.

During the week ending June 1 there were exported from the Atlantic coast 359,900 bushels of wheat, 1,559,800 bushels of corn, 4,600 bushels of oats, and 3,070 bushels of rye.

An elevator trust has been formed in St. Louis. The men at the head of it say that they realize the fact that the scheme will have its ups and downs before it becomes a success.—*Harrisburg Patriot*.

The Toledo *Produce Exchange Report* notes the lengthening list of suicides among unlucky speculators, and observes in extenuation that the May wheat deal is not quite as bad as Monte Carlo.

"How high has wheat been this year?" asked a speculator. "I think it is as high now as it has been," replied the interrogatee; "about four inches I should guess, but I haven't been in the country lately."

The principal objection in the grain trade of the West to the adoption of the cental system is said to be the fear that it would result in a reduction in the margin on which grain would be bought in this country.

"Three years ago I went onto the board with \$25,000, and in less than two years I retired." "With an independent fortune?" "No; until I could raise a little money to go into something else."—*Chicago Herald*.

A Montreal journal calls attention to the decline of Canada's wheat trade with Great Britain, and says that in 1886 Canada sent 3,680,964 hundred weight of wheat to England, while last year she only sent 1,089,728 hundred weight.

Customer—"You sell cracked eggs at half price, do you not?" Clerk—"Yes'm, we always make a 50 per cent. reduction on cracked goods. Anything else to-day?" Customer—"Yes, y u may give me a dollar's worth of cracked wheat, and here's your fifty cents."—*Omaha World*.

Secretary Rusk recently issued a bulletin which reports that agricultural experiment stations have been established in every state, and that forty-six are now in successful operation. With this army of investigators we ought to learn soon how to obtain a good yield of grain and overcome other difficulties.

An agricultural journal gives the acreage planted to corn compared with last year as follows: Illinois, 101 per cent.; Indiana, 103 per cent.; Michigan, 105 per cent.; Ohio, 102 per cent.; Kentucky, 104 per cent.; Missouri, 102 per cent.; Kansas, 99 per cent.; Nebraska, 113 per cent.; Iowa, 105 per cent.; Wisconsin, 107 per cent.; Minnesota, 110 per cent.; Dakota, 119 per cent.



## THE EXCHANGES.

The Boston Chamber of Commerce is to have a new building.

Tickets of membership to the New York Produce Exchange have been quiet at \$1,000.

The Chamber of Commerce of Tacoma, Wash., proposes to erect a \$150,000 building.

The directors of the Chicago Board of Trade were petitioned to hold short Saturday sessions of the Board during the summer months, but refused to grant it.

The San Francisco Chamber of Commerce has adopted an amendment to its by-laws providing for the election of two honorary members of the Chamber each year.

The Toronto Board of Trade is in a hurry to get into its new building, and electric lights have been put up so the work may go on at night as well as during the day-time.

The board of directors of the Chicago Board of Trade has voted to continue its membership in the National Board of Trade. There was some manifest inclination to withdraw from the national organization.

The action of the Chicago Board of Trade in limiting quotations to the members of the Board caused a boom in memberships. They sold on May 22 at \$1,400. Previous to that they had advanced to \$1,275.

The Chicago Board of Trade and the Minneapolis Chamber of Commerce have declined to co operate with the National Board of Trade to secure the adoption of the cental system as a standard for grain measure.

Since the Chicago Board of Trade stopped sending out quotations, the old scheme of having quotations sent out by the New York Produce Exchange has been revived by some of its members. However, it is not likely to succeed.

The Minneapolis Chamber of Commerce has voted to make either old or new wheat deliverable on contracts for future delivery. So hereafter new wheat will have to be accepted unless some agreement is made at the time of the sale.

The directors of the Chicago Board of Trade have served notice on the proprietors of "regular" elevators to remove out clipping machines from their warehouses within five days on penalty of striking the houses from the list of regulars.

The St. Paul Board of Trade held its annual election of officers June 10, and the following officers were chosen: President, J. M. Bohrer; first vice-president, James Harrison; second vice-president, L. J. Templeton; secretary, Edward McNamee; treasurer, William Dawson. The following were chosen directors: H. W. Heine, J. B. Hoxsie, J. A. Tierney, J. M. Bohrer and D. W. Twohy.

The New York *Produce Exchange Reporter* in a recent issue says: "P. T. Barnum was on 'Change last week and showed much interest, especially in the wheat pit. It is alleged that he spent a long time watching the boys trade, and that he was looking for curiosities for his great show. He probably wants to find a bull who has made any money recently, and a trader who hasn't been short of wheat all the way down."

At the annual election of officers and managers of the New York Produce Exchange, held June 8, the following persons were elected: President, Charles C. Burke; vice-president, David S. Jones; treasurer, Edward C. Rice; managers, A. S. Roe, A. H. Brown, F. L. Lockwood, J. V. Hecker, H. F. Kanenbley and John Marshall, and Alexander Munn was elected trustee of the gratuity fund. The newly elected officers took charge June 6, and appointed Thomas P. White secretary.

The Indianapolis Board of Trade held an exciting election of officers on June 10, and a larger vote was polled than for a number of years before. There were three tickets in the field. The principal fight was upon treasurer. The following officers were elected: President, Geo. G. Tanner; vice-president, Wm. F. Piel, Jr.; treasurer, W. F. C. Golt; governors, Wm. Scott, D. A. Richardson, I. S. Gordon, W. B. Holton, Geo. C. Beck, Albert Gall, J. E. McGettigan, Ford Woods, J. W. Murphy, C. F. Sayles and J. F. Wallick.

Quite a sensation was created on the St. Louis Board of Trade on May 21, by the suspension of a number of the young members of the Board for blowing toy whistles on the floor during trading hours. The board of directors decided to enforce the rules and that the suspension must stand. As a result the friends of the suspended members, comprising a large majority of the Board, left the floor in a body and repaired to one of the rooms of the ground floor, where the bulk of the option trading was done. The seceders threaten to start a new exchange.

On June 1 there were 3,760,000 bushels of wheat and 480,000 bushels of corn in store in Liverpool, against 3,720,000 bushels of wheat and 580,000 bushels of corn on the same date last year.

## WATERWAYS

At the last session of the Illinois Legislature \$40,000 was appropriated for the Illinois and Michigan Canal.

The Murray Canal is still unopened, and the prospects are that it will be some time before it will be opened for navigation.

Work on the Canadian ship canal at Sault Ste. Marie, Ont., is being pushed with much vigor. About 100 hands are now at work, which number is to be largely increased.

Several English vessel owners have recently been fined for carrying grain in bulk between the decks of their vessels, and not in bags, as required by the Carriage of Grain Act.

Governor Fifer recently appointed Louis Hutt of Chicago, Capt. J. A. Ames of Streator, and Clarence E. Snively of Canton as commissioners of the Illinois and Michigan Canal.

The Tide Water Canal was greatly damaged by the flood near Wrightsville, Pa. At one place forty canal-boats were left high and dry on the banks. The strain on the loaded ones was too much, and they were breaking apart.

The Chesapeake & Ohio Canal was damaged to the amount of \$75,000 by the recent floods. The locks were washed out, and in a number of places the banks were washed away. The breaks are so numerous and extensive that the canal will probably be abandoned.

It begins to look as though the Nicaragua Canal will in the near future be one of the permanent blessings of the American grain trade. A large number of surveyors and workmen recently left New York for the scene of operations. It is claimed that 1,000 men will soon be at work on the canal.

Two vessels have met with mishaps on the lakes of late. The Owego got stuck on a reef and had to throw 400 tons of flour overboard before she could get off. The Glenora, a barge loaded with 46,959 bushels of corn, sprung a leak, and it was thought a large portion of her cargo would be badly damaged.

The big steamship Chemung recently made the trip from Buffalo to Chicago in 54 hours and 55 minutes, or at an average rate of over 16½ miles per hour for 889 miles. This was the best time the trip had ever been made in, until a few days afterward the Owego beat the Chemung's time by 2 hours and 37 minutes.

Few people out of the lake trade are aware of the size of it. They might quite generally discredit the statement that the hard coal shipped out of Buffalo alone paid the vessels about \$2,000,000 last season, but such is the fact. Besides, coal freights are net, which most freights are net. The vessel pays nothing for handling its black cargo.—*Marine Record.*

A new company, the Northern Steamship Company, has six large new steel steamers, each with a capacity of 9,000 bushels of wheat, on the Great Lakes, and another company has been organized with a capital of \$12,000,000, to build twelve mammoth steel steamers. The Pennsylvania Railroad is said to be interested in this line, which will be called the States-Anchor Line.

The Chamber of Commerce of West Superior, Wis., has sent invitations requesting each commercial body on the chain of great lakes, on the New England and Canadian seaboard, and in the Northwest to send representatives to a convention to be held in that city Aug. 7 for the purpose of promoting the interests of deep water navigation. About 600 delegates are expected to be present.

The Canadian Government has ordered that all the St. Lawrence canals be kept open from midnight on Saturdays until 6 p. m. on Sundays. This order is the outcome of the strong representations of Canadian forwarders that by closing the canals all day on Sunday they were discriminated against, and that traffic was being diverted to the Erie Canal which otherwise would take the St. Lawrence route.

The Canadian Government has given notice that the special rate of toll on the Welland and St. Lawrence canals on cereals will be continued. The special rate of toll is fixed at 2 cents per ton for the passage of cereals through the canals when shipped for Montreal or ports East. The government also exempts from further tolls for passage through the St. Lawrence system if the ordinary full tolls have been paid for passage through the Welland Canal.

During the month of May 1,412 vessels passed through the Sault Ste. Marie Canal; 936 of these were steamers. The total registered tonnage of vessels passing the canal during May was 1,036,882, and total freight tonnage or weight of cargoes 907,237 tons. On account of low water vessels have not been loaded to their full carrying capacity, but in spite of this the gross freight tonnage passing the canal from the opening of navigation to June 1 is 63 per cent. and the gross registered tonnage 115 per cent. greater than during the same period in any previous year in the canal's history. From the opening of navigation to June 1 the total registered tonnage of vessels passing

through the canal was 1,225,369 tons, against 480,888 tons for the same period of 1888, and the freight tonnage was 1,026,859 tons, against 630,659 tons for the same period of last year.

Capt. Marshall, who is now United States Engineer at this point, looked over the grounds for the proposed ship canal to connect Lakes Superior and Michigan while he was in charge at Milwaukee, and in regard to it says \$40,000,000 would not by any means be sufficient to cut the canal. He regards the project as a bad investment, and says the interest on the amount required would for a generation at least be larger than the profits of the vessels engaged in the trade.

A Danish inventor has designed a method of moving vessels by air propellers. He fitted up a steam launch with a windmill with steel blades. It was carried on a frame above the deck, and formed an aerial propeller wheel. Steam machinery was provided for rotating this. With this as a propeller it was proposed to drive the boat. Practically, it was found that a twenty-foot launch of five and one-half beam, with a propeller eight and one-half feet in diameter, could be driven at a speed of five knots per hour in calm weather, and against a fresh breeze at four knots. The engine producing this effect indicated one and one-half horse power. For a single indicated horse power the thrust of the propeller was 36.7 pounds, or about the same as that of a water propeller. It might be supposed that in a contrary wind this thrust would disappear, but, on the contrary, through 75 per cent. of the horizon, the thrust was found to be augmented by the wind. With a larger launch, having a displacement of five tons, a speed over six knots an hour was obtained against the wind. If this proves to be as successful as is claimed, it will soon take the place of all other steam propellers, which stir up the water of canals, and thereby injure the banks.

Mr. Arthur Pickard of Leeds, Eng., has invented a new system of canal construction which is intended to do away with steam and horse power in canal traffic, and carry the boats along by means of a strong current. Mr. Pickard has designed a double canal, at one end of which is a screw resembling the propeller of a steamship. This screw, which is worked by steam power, forces the current in one direction, and causes it to return in the parallel division of the canal the direction of the current being reversible at will. By this arrangement all loss of water is obviated, and the bed of the canal is kept clean. The current is of course confined to each separate level of canal, and when locks intervene another current has to be created. In this case the two currents are worked by the same set of machinery. In order to adapt existing canals to the new method it would be necessary to divide them down the middle by means of a double row of piles driven into the ground, the space between the two rows being filled with clay. Like those on Max Adeler's famous canal, Mr. Pickard's boats are supplied with wheels, but they are not intended for use in the waterway. The boats can be taken from the canal, and run along a tramway to receive their cargoes at a pit bank or any other place not immediately adjacent to the water side. It is proposed that the boats should be of smaller size than those now used, and that they should be built to offer as great a resistance to the water as possible, in order that the current may have full effect in their propulsion.

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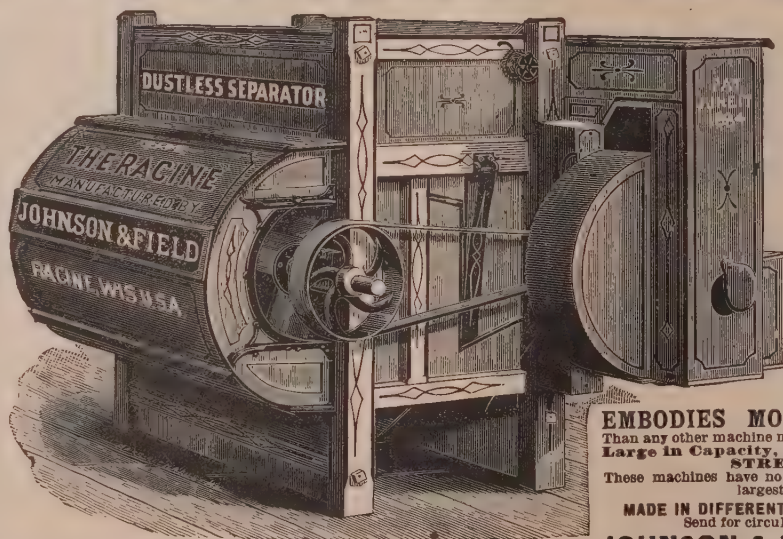
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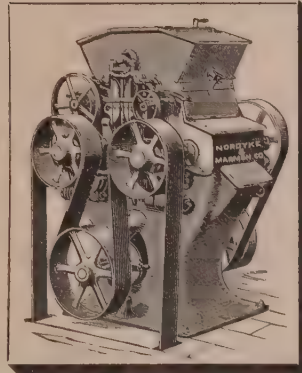


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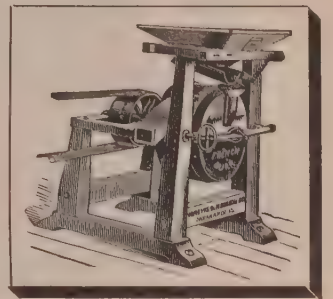


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The Largest Assortment in the World; 28 Sizes and Styles.

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A boy can grind and keep in order. Adapted to any kind of power.



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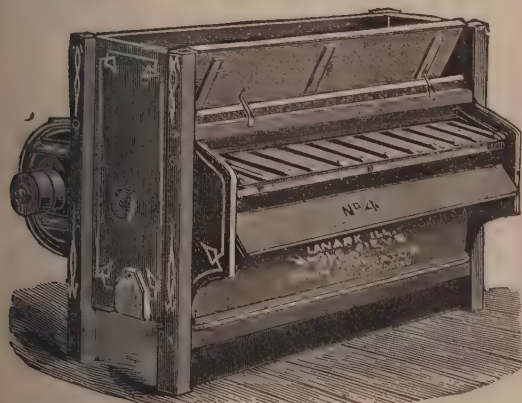
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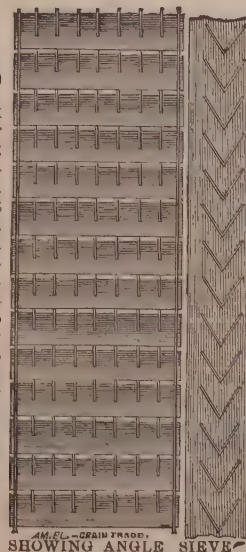
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Everybody is astonished to see the work it does. We challenge competition, for general cleaning purposes. We CAN and WILL separate oats and wheat raised together, the first time through the Separator, and make it fit for market, and not run any wheat over in the oats. No other Separator can help running wheat over, where the suction or blast is depended on to make the separation, which we claim is not the correct principle of separation. The peculiar construction of the sieve, and the motion of it, do the work. We can take oats out of barley just as well, though not quite so fast. No other Separator attempts to do this. We can also clean buckwheat, flax, rice or any other small seeds that any other separator will handle.

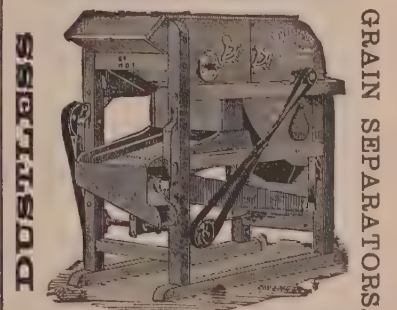
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Address the Manufacturer,

D. T. WEED, { ONE OF THE } PATENTERS, { Lanark, Carroll Co., Ill. }



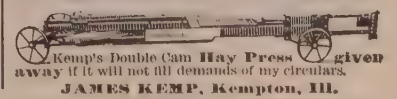
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Warehouse, Seed and Farm Mills for separating all dirt and foul matter from wheat, all grains and seeds. Same machine used for small grain, separates all pieces of cob from shelled corn. Requires much less power and cleans more grain on same floor space than any machine in the market. Manufactured in 20 sizes, having different capacity, up to 2,000 bushels per hour.

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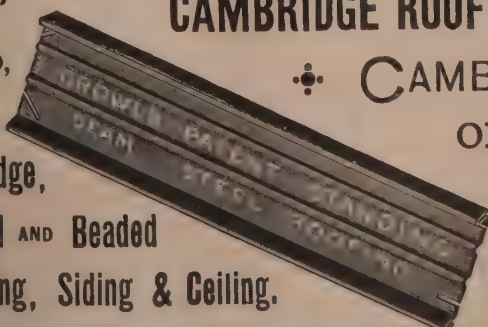
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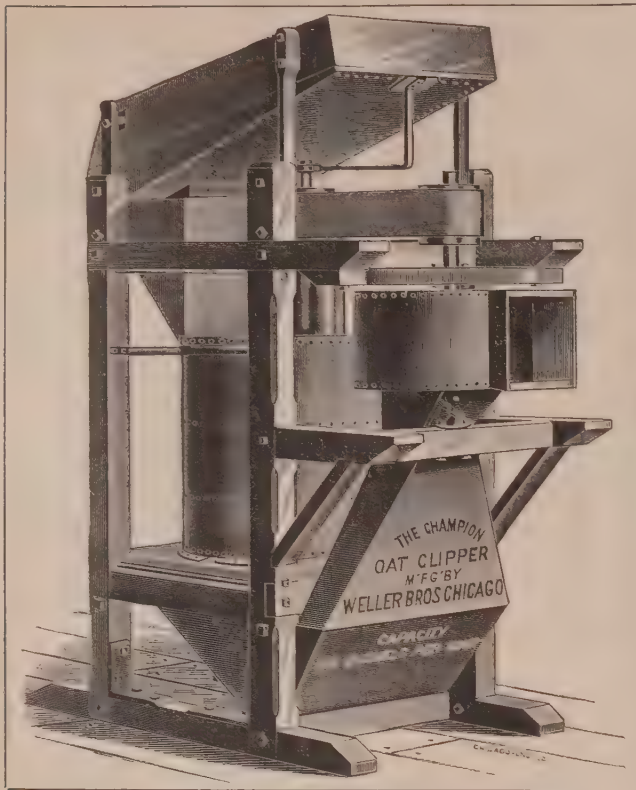
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What we claim for the "Champion" Oat Clipper over all others is:

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6. Takes less power than any other clipper of same capacity.
7. **Does not require any attention except oiling and a regular feed.**

The machine is set up complete when leaving shop, all ready to put into place.

To responsible parties we will ship clipper on 30 days trial, **if not satisfactory to be taken out at our expense.**

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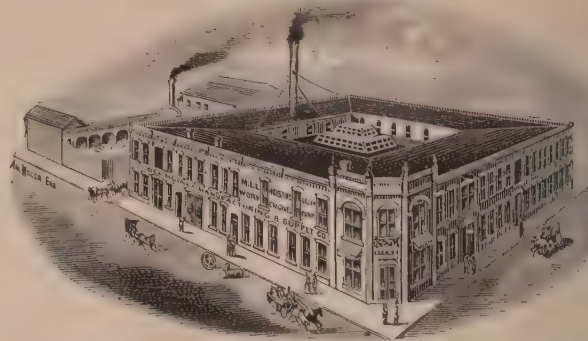
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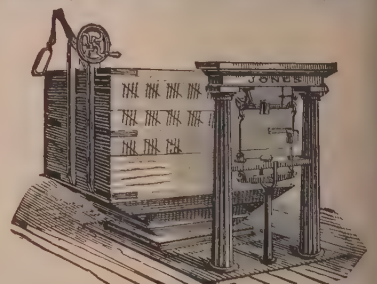
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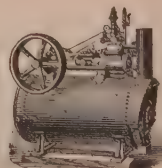
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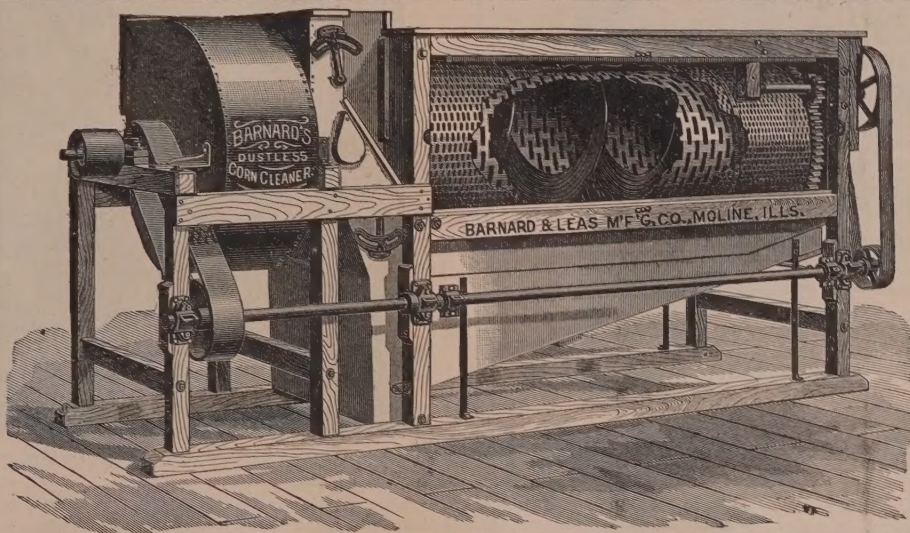
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**BARNARD'S**  
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**BARNARD'S**  
New Horizontal  
**SMUTTER**  
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Especially adapted  
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**Improved Double Screen Dustless Corn Cleaner with Shaker.**

**FULL LINE SPROCKET WHEEL PATTERNS.**

Shafting, Pulleys, Hangers, Boxes, Link Belting, Elevator Buckets, Iron Elevator  
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**ELEVATOR SUPPLIES OF EVERY DESCRIPTION.**

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Respectfully yours,

**ROYER & COON.**

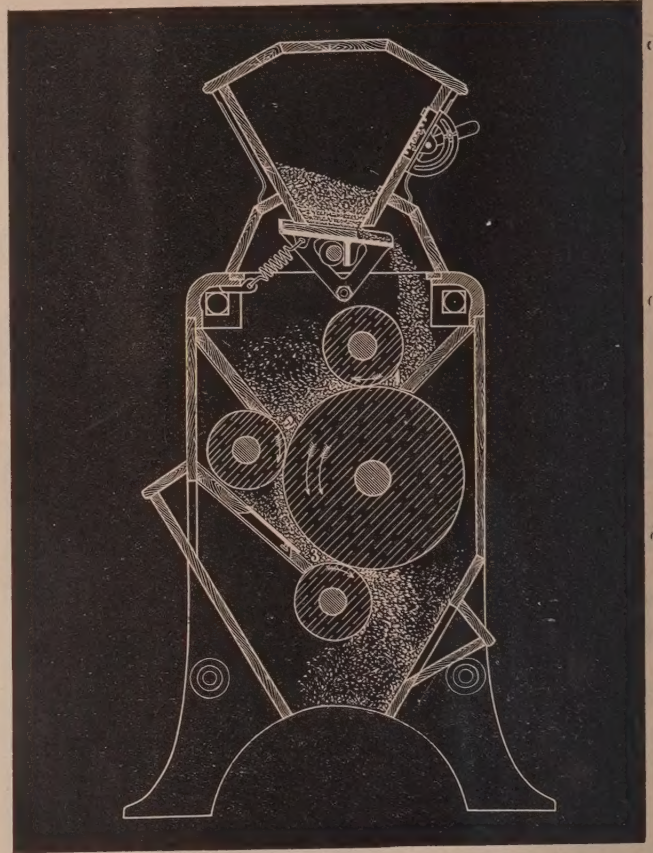
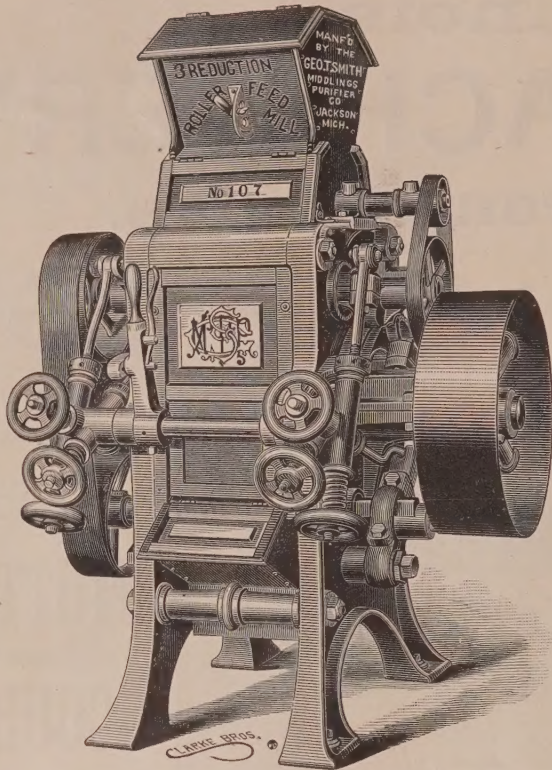
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# THREE-REDUCTION FEED MILL.



**Shelby Roller Mill Co.,**  
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You ask what we think about the 12-inch Feed Mill. The miller says it is a "Daisy." We are grinding from 60 to 75 bushels of corn and oats per hour. We did not expect any such mill, as 25 to 40 was all we asked for. It is pleasing to see the farmers come to the mill with 15 to 20 bushels and ask when they can get it. We tell them to stay in the wagon, and we take the bags and open them up, and they get it all back about as soon as they are unloaded. In short, I believe we could grind 90 to 100 bushels per hour if we could get the bags off the spouts fast enough.

**John Mower,**  
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December 8, 1888.

I have tried the Feed Rolls to my satisfaction, and am satisfied they are "Little Daisies." I have ground corn and oats, screenings, chess and buckwheat; in fact, they will grind anything. I send you this day draft for the rolls.

**Jones & Fredericks,**  
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The Feed Mill we purchased of you gives entire satisfaction, both to us and our customers. In three hours' time we ground 6,300 lbs. of corn and oats, and did a better job than we could have done with our burrs in twice the time. Don't think it takes more than one-half the power to run the rolls that it does the stone.

**F. W. Stock,**  
HILLSDALE, MICH.  
March 25, 1889.

GENTLEMEN:—The twelve inch Roller Feed Mill bought of you this winter, and put up in my "Litchfield" Mill, and for which I send you New York draft, as payment in full, is still giving the best of satisfaction. My millers over there are saying it is the best machine they have in the mill, and are more than pleased, and best of all, I am well pleased myself, as the capacity suits me exactly. The farmers are well satisfied with the grinding we have done for them, and the proof is they are coming back and bringing their neighbors also. The large capacity is another important feature for the farmer. By the time he gets the last bag out of the wagon he can commence loading up the ground feed, so there is time saved for them. You are at liberty to refer any one in need of a "Feed Mill" to me.

**"Mercer Roller Mills,"**  
W. Houston.  
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GENTLEMEN:—I have tested the 12-inch Corn and Feed Mill that I got of you thoroughly, on all kinds of grain, including wet corn from the crusher, cob and all, and must say that it is far ahead of any feed mill that I ever have seen. Its capacity is wonderful and requires but very little power. I drive your mill with a 6 inch single belt, without a tightener. It takes the place of a 36 inch under runner \* \* \* Buhr Mill that requires a 12 inch double belt with tightener very tight speeded at 350 revolutions per minute, which has not as much capacity as your mill. I consider it a model of perfection.

**"Forest City Roller Mills,"**  
Per H. Merchantell.  
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January 12, 1889.

We have now been using your Three Reduction Roller Feed Mill long enough to test its merits, and are happy to say that it is giving entire satisfaction. It takes only one-half the power to run it with large capacity, and doing better work than when we used to drive our 3½ foot burr. The product is much better than from burr, meal finer and more even, and capacity of 12-inch mill as compared to 42-inch burr is more than double. We run the machine with 6 inch belt, whereas our burrs required 10-inch belt with tightener. To say the least, we will save the cost of making this improvement in fuel alone in a short time.

**Shellabarger Mill & Elevator Co.,**  
DECATUR, ILL.  
January 12, 1889.

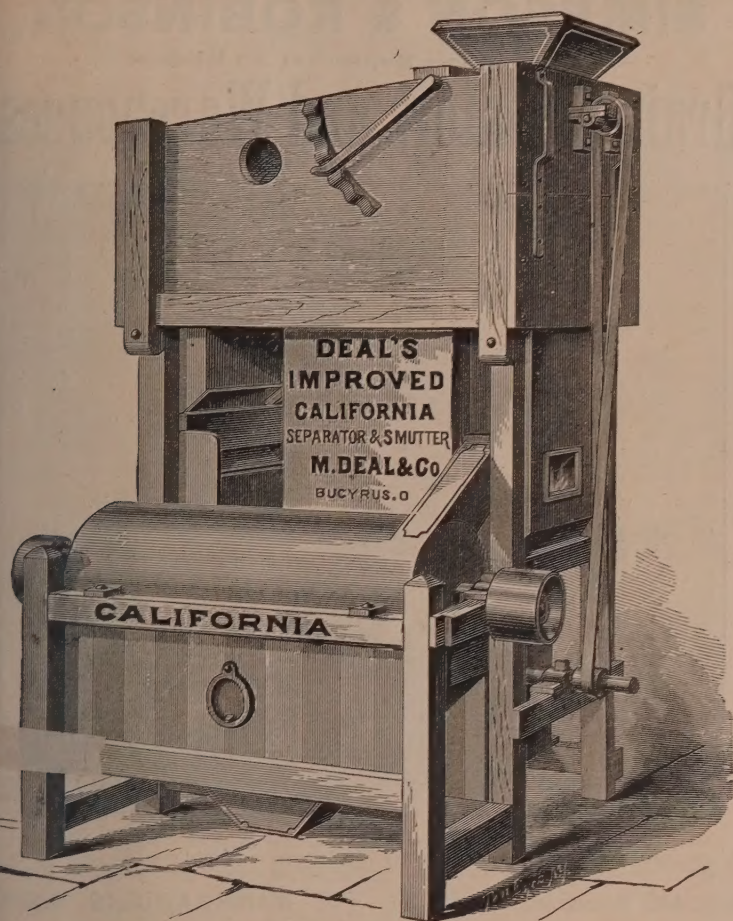
Reply to your favor of the 9th inst., in reference to the Three Reduction Roller Feed Mill we purchased from you, would say that we have been using this for some months grinding our screenings, and we are very much pleased with the machine. We have used both burrs and the roller mill on the same stock, and we are frank to say that this machine does better work with less power than any other machine we have ever used.

**Rice, Tapp & Givens,**  
PROVIDENCE, KY.  
October 15, 1888.

Inclosed find check for three hundred and ten dollars and fifty cents, in full for No. 108, 12-inch Corn Roller Mill. Have never been better pleased with any machine for any purpose. We have got the mill we want, and here is your money, with our thanks to you for the genius that produced it.

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Canadian Shops, Stratford, Ont. **JACKSON, MICH.**





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The Best, Finest Finished and Most Accurate.  
NO ELEVATOR OR MILL IS COMPLETE WITHOUT THEM.

THOUSANDS IN USE.

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Deal's Complete Line of California Magnetic Grain Cleaning Machinery  
FOR WAREHOUSES, ELEVATORS AND MILLS.

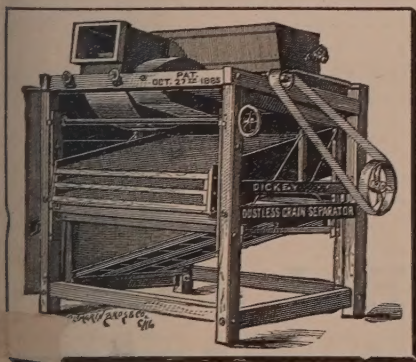
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Made in any desired size and capacity to accommodate the largest elevators  
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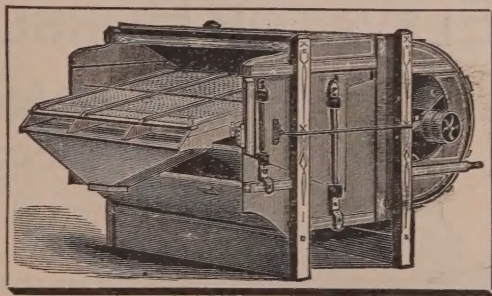
### THE END SHAKE MILLS

[Motion of shoe from front to back.]

Are highly recommended for use with horse power,  
AND WARRANTED TO GIVE BETTER SATISFACTION  
When run in this way than any other mills made.

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ALL PARTIES IN NEED OF CLEANERS ALLOWED  
THIRTY DAYS' TRIAL  
WITH PRIVILEGE OF RETURNING IF NOT SATISFACTORY.



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## THE CALDWELL PATENT SPIRAL STEEL CONVEYOR,

Made of Steel, Double Bolted, Double Collared, with Extra Strong Couplings.



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THIS BUCKET is of  
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No Seam. No Rivets.  
Light, Strong, Durable.  
Discharges well at high  
speed.

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Perhaps the highest compliment that could be paid the "SALEM" Bucket is the fact that during the past few years

**Its Shape Has Been So Closely Imitated**



By other manufacturers as to infringe our patented rights, but experience reveals the

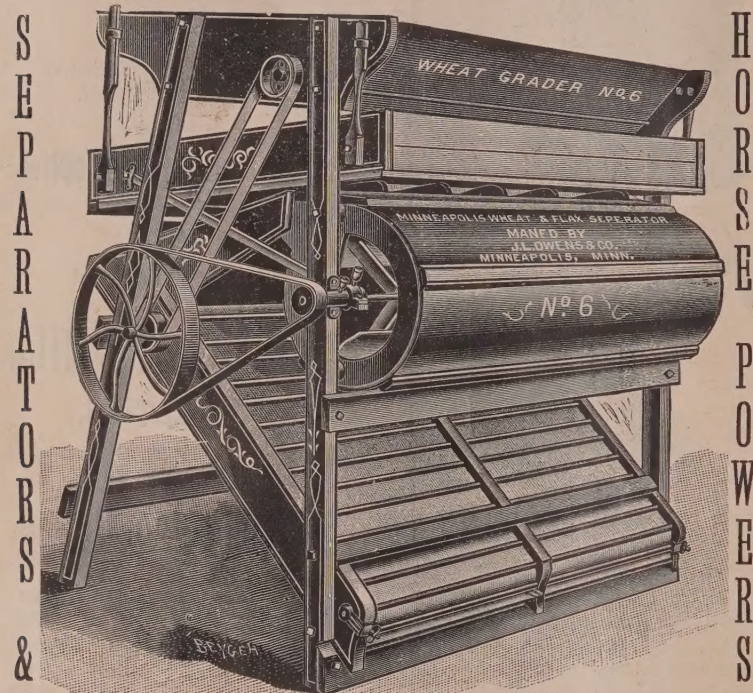
**IMPERFECTIONS OF IMITATIONS.** And we therefore take it as a further compliment to the "SALEM" Bucket that some of its old patrons who were induced to try the imitations have now returned to the "SALEM" Bucket, thereby acknowledging it to be the most satisfactory. Don't be deceived by other makes of Buckets that are claimed to be "just as good." Insist upon having the **Original and Reliable Salem Bucket.** All legitimate Salem Buckets are plainly marked with the word **SALEM.**

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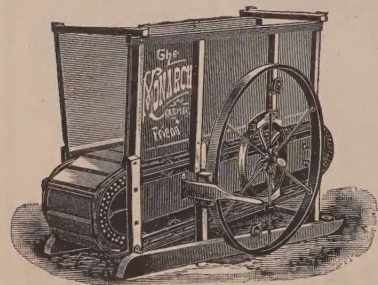
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